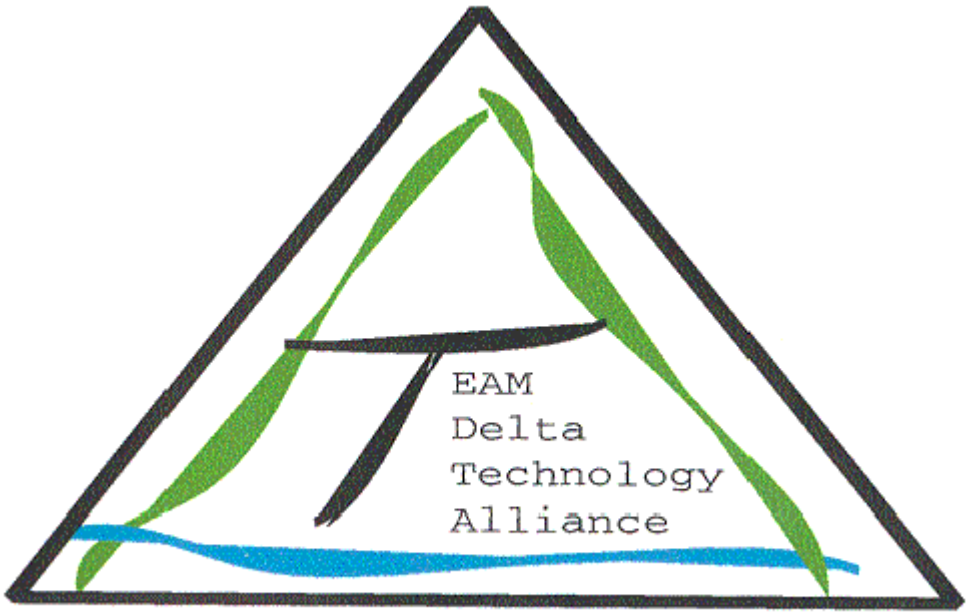

TEAM Delta:

Technology-based Economic Development Alliance in the Mississippi River Delta

Final Report

Prepared by

Arkansas Science & Technology Authority

Mississippi's Institute for Technology Development
Louisiana Partnership for Technology and Innovation

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Executive Summary

An alliance of technology organizations from Arkansas, Louisiana, and Mississippi carried out the project called TEAM Delta: Technology-based Economic Development Alliance in the Mississippi River Delta.

During the roughly 19 months of the project, Technology-based Economic Development Workshops were held in each state to elevate the role that technology can play in local

economic development strategies. Nine Community Technology Assessments followed the state-level workshops in: Dumas (1), Helena (2), and Monticello (3), Arkansas; Delhi (1), Tallulah (2), and Monroe / W. Monroe (3), Louisiana; and Greenwood (1), Clarksdale (2), and Cleveland (3), Mississippi. One community in each state (marked 1 above) had no higher education resources, one in each state (2) had a two-year college campus, and one in each state (3) had a four-year campus. The Community Technology Assessments were designed to examine the community's value-added businesses (those best able to compete in a global economy) and their linkages to suppliers, support companies, banks, schools, university research, and other resources important to technology-based economic development. Among other things, the Community Technology Assessments identified the kinds of resources needed to support technology-based firms in the three-state Delta region.

The Accessing Technology Conference followed the Community Technology Assessments. The conference, "Regional Empowerment, Economic Growth: Accessing Technology in the Delta Region," was held in Vicksburg, Mississippi on January 25 and 26, 2001. The conference showcased the lessons learned from the project.

The overall goal of the project was to demonstrate that technology plays an important role in rural economic development and to facilitate using the TEAM Delta processes in other communities through web-based training modules. The content for ten training modules is derived from all other aspects of the TEAM Delta project and provides easy access to the processes that support technology-based economic development for communities. The modules can be found in the Appendix of this report, as well as on-line at <http://www.teamdelta.org/>. The modules include information on the following topics:

Module 1. Introduction to TEAM Delta's On-Line Learning Modules
Module 2. A Brief Economic History of the United States
Module 3. Seeing the Future
Module 4. Building Community Competitive Advantage
Module 5. Understanding Your Economy
Module 6. How to Conduct a Community Technology Assessment—Part 1
Module 7. How to Conduct a Community Technology Assessment—Part 2
Module 8. Developing a Community Technology Strategic Plan
Module 9. Building Leadership Resources
Module 10. Measuring Community Progress

1. Introduction

An alliance of technology organizations from Arkansas, Louisiana, and Mississippi proposed carrying out a federally-funded project titled "TEAM Delta: Technology-based Economic Development Alliance in the Mississippi River Delta." The project, supported by the Technology Administration in the U.S. Department of Commerce, was a community-oriented, robust teaming arrangement focusing on the Mississippi River Delta region within Arkansas, Louisiana, and Mississippi to help the region become part of the technology-based global economy.

The $290,000 grant to Mississippi's Institute for Technology Development, Inc. (ITD), was part of the Experimental Program to Stimulate Competitive Technology (EPSCoT), a competitive matching grants program administered by the Office of Technology Policy. The Mississippi-based ITD worked in partnership with the Arkansas Science & Technology Authority and the Louisiana Partnership for Technology & Innovation. The award was made September 28, 1999.

Project Design

The multi-state, multi-jurisdictional project was designed to improve the innovative capacity of technology-based economic development in the Mississippi River Delta region and provide an assessment of the resources Delta communities have today and need in the future. The specific challenge addressed by the TEAM Delta partners was the transformation of the Delta into a participant in the technology-based global economy.

The TEAM Delta project supported four new and innovative activities to identify the local resources necessary to successfully support technology-based economic development: (1) Technology-based Economic Development Workshops, (2) Community Technology Assessments, (3) Asynchronous Learning Modules, and (4) the Delta Region Accessing Technology Conference.

The community-oriented, technology-based economic development approach encouraged local communities to incorporate technology-based economic development into their local strategic plans, train local leaders in community technology assessments, improve capacity of community leaders with web-based training and communication, and promote community awareness of state and federal technology resource programs.

1. Technology-based Economic Development Workshops. Technology-based Economic Development Workshops were innovations that focused on community-oriented, technology-based economic development.

The primary impact of the workshops was to increase the likelihood that the target communities would incorporate technology-based economic development into their local strategic plans. This project supported three Technology-based Economic Development

Workshops, one in each state. The workshops were conducted in less than full-day meetings focused on the three project communities selected within each state (Monticello, Helena, and Dumas, Arkansas; Monroe, Tallulah, and Delhi, Louisiana; and Cleveland, Clarksdale, and Greenwood, Mississippi.). These communities have, (1) a university, (2) a two-year community/technical college, or (3) neither a university nor a two-year college, and were selected to assess whether higher education resources influence technology-based economic development in the Delta. These workshops uniformly introduced the concepts of Community Technology Assessments and the Asynchronous Learning Modules.

2. Community Technology Assessments. The innovative approach used for the Delta's Community Technology Assessments was based on a model borrowed from New Zealand that examines value-added businesses (those best able to compete in a global economy) and their linkages to suppliers, support companies, banks, schools, university research, and other organizations important to technology-based economic development. The project undertook pilot-scale Community Technology Assessments in the nine Delta communities.

The Community Technology Assessments aimed at three primary impacts. First, they shifted the focus from state and federal technology programs, which represent a dominant culture in government, to community-oriented resources needed for technology-based economic development. Second, they provided processes and "how-to" guides for Community Technology Assessments, resulting in deliverables suitable for dissemination to other communities. Third, conducting Community Technology Assessments identified resources needed to support small technology-based businesses in the three-state Delta region.

Even though the assessments have been completed, it is expected that the TEAM Delta partners will continue to use the lessons learned during the project and will continue to conduct Community Technology Assessments in other communities.

3. Delta Region Accessing Technology Conference. The Delta Region Accessing Technology Conference was based on the American Society of Mechanical Engineers' (ASME International's) model. The Conference was held January 25, 2001 in Vicksburg, Mississippi, in the heart of the Delta, and featured both reports by TEAM Delta partners on the lessons learned during the project and presentations by others on resources and tools that Delta communities might use in their technology-based economic development initiatives.

4. Asynchronous Learning Modules. One way in which the TEAM Delta effort was planned to continue was through the development of web-based training or asynchronous learning modules (ALMs). These learning resources will continue to be available to guide community leaders, help them manage information, and link to other technology development resources electronically. Regional Technology Strategies, a TEAM Delta partner, took the lead in developing the ALMs. Input from community stakeholders was

used to help develop the module content.

The web-based training modules' primary purpose is to provide easy access to virtually all of the information developed during the project. The modules will continue to improve as TEAM Delta partners use them to stimulate competitive technology in the Delta as well as other areas. This resource will be available for training and to help local economic developers acquire the skills needed to promote and perpetuate "best practices" in community-oriented, technology-based economic development. ALMs have already been promoted at the Southern Technology Council and ASME International.

Organization of the Report

The project final report is intended to (1) convey the lessons learned during the course of the project, (2) document that TEAM Delta carried out all elements contained in the project design, and (3) submit the major project deliverables. These three things are intertwined with one another. For example, the lessons learned during the Community Technology Assessments were reported at the Delta Region Accessing Technology Conference. To help the reader navigate the report, its organization is discussed here.

The project overview and lessons learned are based on two presentations made at the Delta Region Accessing Technology Conference and are presented in section two of the report.

The ***Technology-based Economic Development Workshops*** are summarized in section three.

The ***Community Technology Assessments*** are summarized in section four and the Community Profiles generated by the TEAM Delta project for the nine communities are also included in section four.

Company Case Studies are presented in section five.

The ***Delta Region Accessing Technology Conference*** is summarized in section six.

The ***Asynchronous Learning Modules*** are summarized in section seven**.** The content of the Asynchronous Learning Modules is presented in Appendix A. The modules contain much of the content presented at the ***Technology-based Economic Development*** Workshops as well as information about how to conduct and evaluate the ***Community Technology Assessments***.

Acknowledgement

TEAM Delta partners are grateful for the broad support of the TEAM Delta project. Major financial and in-kind support was provided by the following orgranizations:

- Arkansas Science & Technology Authority,

- ASME International,
- BellSouth,
- Community Technology Solutions, a division of Mississippi's Institute for Technology Development,
- Entergy Corporation (in Arkansas, Louisiana, and Mississippi),
- Enterprise Corporation of the Delta,
- Louisiana Partnership for Technology and Innovation,
- Regional Technology Strategies,
- Southern Growth Policies Board and the Southern Technology Council,
- Southwestern Bell,
- U.S. Department of Commerce, and
- The Winthrop Rockefeller Foundation.

In addition, the following organizations contributed in-kind support: Digital Louisiana, EAST Project, Explornet, Foundation for the Mid South, the Louisiana Department of Economic Development, Louisiana Technical College at Tallulah and West Monroe, Mississippi Development Authority, the Arkansas Departments of Economic Development and Information Systems, the University of Arkansas at Monticello, the Monticello Economic Development Commission, and the City of Dumas.

2. Project Overview and Lessons Learned

This section of the report is based on two presentations delivered by TEAM Delta partners at the Delta Region Accessing Technology Conference held January 25 and 26, 2001 in Vicksburg, Mississippi.

*Technology Communities**

The topics before us are important, they are about education, technology and economic development. Consider these two points. First, "By the year 2006 we predict almost half the workers in the United States will work for industries that either produce information technology or use it intensively," according to Robert Mallett, Deputy Secretary of the U.S. Department of Commerce, in remarks at the EDA National Forum, "eCommerce and the Digital Divide" (May 31, 2000). The implication here is that many new entrants to the workforce, as well as workers in the workforce already, need to have their skills upgraded.

Second, in addressing the National Governors' Association (July 11, 2000), Federal Reserve Chairman Alan Greenspan said, according to the Associated Press, that government has no greater challenge than making sure it properly educates students to keep pace with a rapidly changing economy. "The heyday when a high school or college education would serve a graduate for a lifetime is gone," Greenspan said. "Today's

recipients of diplomas expect to have many jobs and to use a wide range of skills over their working lives."

We are meeting as part of the project titled, Technology-based Economic Development Alliance in the Mississippi River Delta, or TEAM Delta. A lot has happened since the U.S. Department of Commerce's Technology Administration awarded the EPSCoT project over a year ago. TEAM Delta has conducted workshops in Arkansas, Louisiana, and Mississippi, and visited nine communities, three in each state, to conduct technology assessments. This conference is another proposed activity of the proposed project. In addition, partner organizations have developed responses to community needs. One example of this was the Southern Growth Policies Board conference called "One South, Digitally Divided," for which information was prepared that ought to be of great interest to Delta communities. (This study can be found on the Southern Growth web site at www.southern.org.) Some of the nine communities participated in other projects, including the Governor's Initiative for Statewide Technology Advancement in Arkansas. The Winthrop Rockefeller Foundation's Rural Community Jump-Start Technology Initiative has also provided operational information of value to the TEAM Delta project.

In preparation for this presentation, TEAM Delta partners reviewed much recent information from Delta communities. In terms of the community technology assessments, there seem to be **Seven Delta Issues** that emerge from this review. Delta communities are:

1. Losing traditional jobs.
2. Unable to meet the growing demands for skilled and educated workers.
3. Dealing with a limited leadership pool (e.g., STP, which means the Same Ten People).
4. Isolated, in the sense of having low population density, large distances between people, and being served by different local telephone companies.
5. Addressing education issues, including investments in technology resources (e.g., EAST labs in Arkansas) and links to higher education resources.
6. Content with the status quo.
7. Dealing with the unfinished business of race.

There will be more detailed information from the communities in a panel session tomorrow. For now, it is important to point out that this information is derived from the community assessments. As we consider these Delta issues and think about them in the context of more global perspectives, the issues seem to fall into three areas that, taken together, form a three-step staircase built from assessment, planning, and implementation, as shown in the figure. It was the intention of TEAM Delta that, after completing technology assessments in the first phase, planning and implementation would be tackled in a phase-two proposal under EPSCoT. This, however, does not appear to be possible, so TEAM Delta has attempted to stretch phase one from just assessments, to include some information about planning and to offer some ideas about implementation.

In reviewing these seven Delta issues for a previous presentation, the author was struck by the thinking of experts and extracted **12 Global Perspectives**, which are organized according to the three-step staircase. Some of them are related to assessment, some are related to planning, and some are related to implementation, but keep in mind that some perspectives may apply to more than one area.

Assessment

Roger Caves, California Institute for Smart Communities (www.smartcommunities.org), said: Several presentations at the June 28-29, 1999 Southern Growth Policies Board meeting in Charleston, WV are worthy of note.

Global Perspective 1. In real estate, it is location, location, location.
In smart communities, it is bandwidth, bandwidth, bandwidth.

Andrew Cohill, Blacksburg Electronic Village, explained (at the June 28-29, 1999 Southern Growth Policies Board meeting in Charleston, WV) how technology in Blacksburg appears to get people more involved in the community.

Global Perspective 2. The number one thing is people.
People create content and use information.

He went on to outline the roles of technology in the community as:

- Education.
- Creating public space in cyberspace. This is sometimes controversial because the private sector says it will take care of this need. Healthy communities have healthy businesses.

- Economic development initiatives. This implies a new methodology for economic development, based on information not manufacturing. Information companies don't need spec buildings.
- Telecommunications infrastructure development. This is the information-age equivalent of paved roads and clean water.

The Milken Institute's Blueprint for a High-Tech Cluster [Policy Brief (No. 17), August 8, 2000, by Ross C. DeVol] identifies the elements that set the stage for the formation of high-tech clusters. These include: research facilities, cost of doing business measures, proximity to excellent educational facilities and research institutions, network of suppliers, technology spillovers (from one organization to another), venture capital, quality of place factors, cost of living (especially home prices), and

(Global Perspective 3.) A Trained/educated workforce

Planning

Bill Myers, The United States Internet Council [www.usic.org] suggested at the January 14, 2000 Southern Technology Council meeting in Nashville, TN that we should

(Global Perspective 4.) Focus on what matters.

The issues that matter in the information-age are:
- Speed. Create incentives for investments in bandwidth.
- Education. Pick sides, the old or the new; the highly educated or hardly employable?
- The Digital Divide. This is about density, terrain, and distance.

Andrew Cohill, Blacksburg Electronic Village, also spoke about planning at the June 28-29, 1999 Southern Growth Policies Board meeting in Charleston, WV. He said:

(Global Perspective 5.) Plan lightly:
Distinguish between what you want to do and what you can do.
Keep two lists. Do what you can do first.

At the conference, Realigning the Research Enterprise: Building A New Model for R&D Productivity in Midway, Utah, July 11-13, 1999, Mac Portera, President of Mississippi State University, outlined "Mississippi Science and Technology." He discussed his university's four-point formula for success. If we were to base a community plan on his formula, the plan would:

(Global Perspective 6.) Focus on existing strengths.
Develop a simple, crisp agenda.
Dare to view the future.

Select four focus areas for development.

Dr. Charles Vest, Massachusetts Institute of Technology, spoke about research and development and technology's importance in an address at the June 28-29, 1999 Southern Growth Policies Board meeting in Charleston, WV. In his presentation, titled, "From WWII to WWW," he said that:

(Global Perspective 7.) Complacency is the enemy.

Wayne Fawbush, Vermont Sustainable Jobs Fund, addressed the Working Toward the Future workshop in Alexandria, LA on March 23, 2000. He told the story about the people in Burns, Oregon, who realized that they were the only ones who were going to fix their town.

Global Perspective 8. You care more about your community than anybody else.

They started with a community long-term plan using the resources at hand. Getting outside help and recruiting are representative of the old economic model. The new model is to tie production to the market and measure wealth creation. He has four rules. (1) *Always work with partners.* Share stuff, don't buy individually. Market jointly, bundle what you've got to compete with big companies. Competitors will work together if there is a new opportunity to make a profit. (2) *Use what you control.* Source locally (that is, use local resources). (3) *You have to tell a story* about the product. Market, market, market. Go with the market first. One can control the production cost, but not the market. Any value-added project takes lots of work. (4) *You need a workforce that is capable* of producing at the value-added level. Align the workforce with the value-added effort. The tasks include employee recruitment (not easy), training (relatively easy), and retention (hard, by this time you are too tired). These things do not cost much. The key question to ask is: What would you like to be doing a year from now to create wealth in your community?

Implementation

Jack Pellicci, Vice President, Global Service Industries, Oracle Corporation, discussed "Digital Divide or Digital Opportunity....Myth Versus Reality," at the October 1, 2000 Southern Growth Policies Board Conference (www.Southern.org) titled, One South Digitally Divided, in Roanoke, Virginia.

Global Perspective 9. Think Big, Start Small, Scale Fast --- Deliver Value.

Among his other points, Plan and Operate at *e*-Speed, Create Meaningful Partnerships, and Encourage Low Risk Experimentation

Don Tapscott is the author of The Digital Economy and Growing Up Digital. In a 1999 article ("Digital Dad," Communication World, December 1999 - January 2000, p. 19), he says, we are approaching "a unique period in human history where for the first time,

(Global Perspective 10.) children are an authority

on something that is really important. . . .
[They] are an authority on the big revolution that is changing every institution in society."

F. Selby Wellman, Cisco Systems, addressed "Telecommunications: Key to the South's Future … the Internet Economy" at the June 28-29, 1999 Southern Growth Policies Board meeting in Charleston, WV. He identified two things that matter.

Global Perspective 11. Beware of Naysayers.

He used the quote, "Obstacles are those frightful things you see when you take your eyes off the goals (Unknown)," to illustrate his point. He said that failure to acknowledge and adapt to major changes can be damaging, and that:

Global Perspective 12. The fast will beat the slow.

Let's close with a couple of stories.

The first one is about expectations. Bill Parcells, the successful football coach wrote (in the Harvard Business Review, "The Tough Work of Turning Around a Team," Nov.-Dec. 2000, pp 179-184) about being the head coach of the New York Giants in 1983 when the team won three games. He had big name players with lots of talent, high salaries, and an attitude. He spent a year trying to work with them their way, but at the end of the season their record was once again dismal. The only reason he kept his job as head coach was that management couldn't find anyone else who wanted the job. So Bill Parcells decided to coach his way because he had nothing to lose. In the next six years the Giants won two Super Bowl championships. These are the three things Parcells learned:

- Make it clear that you are in charge; don't wait to earn your leadership.
- Confrontation is healthy. This is not about get-in-your-face confrontation, but deliberate one-on-one discussions about what is expected.
- Set small goals and then hit them.

The last story is about setting your sights high and never giving up. It is about a young African American from a single parent family on Long Island. He was a good student, excelling at math. Difficulties in English, however, required him to be held back to repeat the fourth grade. A favorite uncle died when he was in junior high, but he had wrestling, at which he was very talented. As a senior in high school his wrestling was good enough to merit a scholarship offer, but a wrestling injury ended his hopes of attending college. He went to the local community college and studied mechanical engineering technology because he was good at math. He was going to be a technician, whatever that was. He was a co-op student, working half time for Brookhaven National Laboratory as a half-time student. At Brookhaven he learned that technicians were at the bottom of the pecking order and a friend suggested that they become engineers, so they transferred to the University of Michigan, got degrees in engineering and he went back to

work as a development engineer at Brookhaven. He enrolled for graduate studies at the University of Massachusetts at Amherst, earned a Ph.D., and went to work as a research engineer at General Electric. His story is told in a book titled, "Never Give Up: The Marshall Jones Story."

Like Bill Parcells, Marshall Jones set small goals, didn't give up, and achieved a great deal. He was selected as the Black Engineer of the Year in 1994.

*TEAM Delta Project Overview**

What's This All About?
TEAM Delta is a project funded by the U.S. Department of Commerce, Technology Administration, under the Experimental Program to Stimulate Competitive Technology (EPSCoT).

. . . What is EPSCoT
EPSCoT is an experimental program. Our project is intended to answer the question: Can technology really affect change?
EPSCoT is intended to stimulate. Our program will not create technology.
EPSCoT is competitive. The technology should have commercial/economic value.
EPSCoT is about technology, the means to create better products and processes.

Building Community Competitive Advantage
This is a project carried out by TEAM DelTA, a partnership including the Delta Technology Alliance (DelTA), Arkansas Science & Technology Authority, Institute for Technology Development/Mississippi Technology, Louisiana Partnership for Technology and Innovation, American Society of Mechanical Engineers, Entergy Corporation, Enterprise Corporation of the Delta, Regional Technology Strategies, and Southern Technology Council.

TEAM DelTA Communities
There are nine Delta communities in the TEAM Delta project. In Arkansas the communities are Monticello, Helena, and Dumas. In Louisiana, the communities are Monroe/West Monroe, Tallulah, and Delhi. In Mississippi, the communities are Cleveland, Clarksdale, and Greenwood.

TEAM DelTA Project Outline
There are four parts to the project:
1. State Workshops
2. Community Technology Assessments
3. Delta Accessing Technology Conference
4. Internet-Based Learning Modules

State Workshops: Potential Opportunities and Obstacles to Technology-based Economic Development

State	Opportunities	Obstacles
Arkansas	Good Natural Resources; Sense of Community, Leadership, ability to influence; New markets Micro-enterprises; Invest in people	Education in general; Social Capital – race issues, lack collaboration, cooperation, vision (direction, image)
Louisiana	Invest in people; Internet marketing; Good Natural Resources & space; Utilize People; coordinate with university & technical colleges;	Workforce needs – technical training Out migration Lack of cooperation & vision - local, state(s)
Mississippi	Import/Export; Good Natural Resources; innovative local firms; Good access to higher education; Invest in people; build clusters	Negative perceptions; Locating & keeping educated people; Resistance to change; Soft Infrastructure; Access to capital

How Useful is More Information About These Topics?

Community	**Very Useful**	**Not as Useful**
Dumas, AR (1)	Technology & Innovation; Workforce Skills; Social Capital	Entrepreneurship;
Helena, AR (2)	Value-added; Cluster & Networks; Tech. & Innovation; Social Capital; Finance Capital	Traded Sectors; Workforce Skills;
Monticello, AR (3)	Value-added; Social Capital; Technology & Innovation; Finance Capital	Globalization
Delhi, LA (1)	Value-added; Technology & Innovation; Social Capital; Finance Capital	Cluster & Networks; Globalization
Tallulah, LA (2)	Value-added; Social Capital; Workforce Skills; Technology & Innovation; Globalization	Entrepreneurship; Traded Sectors
Monroe **W. Monroe, LA** (3)	Value-added; New Economy Characteristics;	Entrepreneurship Financial Capital

	Technology & Innovation	
Greenwood, MS (1)	Value Added; Cluster & Networks; Social Capital; Technology & Innovation; Entrepreneurship	NONE
Clarksdale, MS (2)	Value-added; Technology & Innovation; Social Capital; Workforce	Globalization Entrepreneurship
Cleveland, MS (3)	Technology & Innovation; Entrepreneur; Social Capital	Value-added

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

How Much Strategic Action Planning is Going on in Your Community?

Community	**Most Perceived Strategy Planning**	**Least Perceived**
Dumas, AR (1)	Improving K-12; Industrial Networks	Angel Investor; Focused Recruit
Helena, AR (2)	Univ. Tech. Trans.; Industrial Networks	Angel Investor
Monticello, AR (3)	Comm. Technology Plan; Ind. Networks; Univ. Tech. Transfer; Tech. Training	Research Park
Delhi, LA (1)	K-12, Industrial Networks; Focus Recruit	Comm. Tech. Plan
Tallulah, LA (2)	K-12; Focused Recruitment;	Entrepreneurship; Comm. Tech Plan
Monroe W. Monroe, LA (3)	K-12 Schools; Entrepreneurial Ed.; Technology-Focused Training	Comm. Tech. Plan; Tech. Incubator
Greenwood, MS (1)	Industrial Networks; Tech. Incubator; Technology-Focused Training; K-12 Ed.	Angel Investor; Comm. Tech Plan
Clarksdale, MS (2)	Tech. Incubator; Focused Recruitment; K-12 Ed.; Technology-Focused Training	Angel Invest; Industrial Network
Cleveland, MS (3)	Angel Invest; Industrial Network	Comm Tech Plan; Angel Network

(1) Communities with no higher education resources.
(2) Communities with two-year college.

(3) Communities with four-year campus.

A Community Model

This model is based on the work of Ifor Williams, a network consultant in New Zealand.

Key Word Visions

Dumas, AR (1)	Progressive, Technologically Advanced Schools, Inviting, Working Together to Overcome Racial & Socio/Economic Barriers, Friendly, Grow With Change
Helena, AR (2)	Economic Opportunities for All, Outstanding Quality of Life, Educational & Business Opportunities, People Coming Together, Cultural Diversity
Monticello, AR (3)	Progressive, Healthcare & Technology Hub, Leisure, Recreation, Growing Business & Industry, City/County/State Connectivity
Delhi, LA (1)	Progressive; Safe; Excellent Healthcare & Education; Attractive Location for Business, Retirees, Tourists; Good Telecommunications
Tallulah, LA (2)	Strong Community, Diverse Economy, Full Employment, Quality Education for All, Support New & Expanding Business, Participating in World Economy
Monroe **W. Monroe, LA** (3)	Not Available
Greenwood, MS (1)	Sustainability, Racial Harmony, Hospitality, Economic Stability, Using Current Technology, Retail Destination, Educated & Talented People
Clarksdale, MS (2)	Safe, Friendly; Quality Healthcare, Education & Recreation; Good Standard of Living; Support Tourism, Industry & Technology Businesses

Cleveland, MS (3)	Quality Family Environment; Housing; Economic Stability; Education &Research; Good Race Relations; Industry, Manufacturing & Technology Businesses

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

How would you divide spending on Technology-based Economic Development?

Community	Outside Recruit	**Existing Business**	**New Local Business**
Dumas, AR (1)	33%	46%	21%
Helena, AR (2)	32%	33%	35%
Monticello, AR (3)	37%	29%	34%
Delhi, LA (1)	27%	37%	37%
Tallulah, LA (2)	25%	40%	34%
Monroe / W. Monroe, LA (3)	22%	42%	34%
Greenwood, MS (1)	25%	45%	30%
Clarksdale, MS (2)	20%	52%	28%
Cleveland, MS (3)	35%	38%	27%

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

How would you divide spending on Technology-based Economic Development?

	Workforce/Ed.	**Tech. Tran**	**Financial Inv.**
Dumas, AR (1)	41%	36%	23%
Helena, AR (2)	36%	36%	29%
Monticello, AR (3)	50%	36%	14%
Delhi, LA (1)	35%	33%	32%
Tallulah, LA (2)	41%	26%	33%
Monroe / W. Monroe, LA (3)	48%	20%	31%
Greenwood, MS (1)	38%	36%	26%
Clarksdale, MS (2)	64%	20%	16%
Cleveland, MS (3)	46%	32%	22%

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

Five years from now

Community	**Hope to be spending economic development funds on:**
Dumas, AR (1)	Not Available
Helena, AR (2)	Tech. Transfer; Recruit industry; new & exist bus.; Capital Invest
Monticello, AR (3)	Tech. Transfer; Exist & new bus.; W.F. $ Ed.; Recruiting Ind.;

Delhi, LA (1)	Industrial & Ag. dev.; Healthcare; Tourism; Preserve good rural life
Tallulah, LA (2)	W.F train & ed.; assist new & exist. Bus.; culture & rec. facilities
Monroe / W. Monroe, LA (3)	Not Available
Greenwood, MS (1)	Technology train & ed.; Roads; Hwy 82; Housing; Airport
Clarksdale, MS (2)	High-speed CIT, Parks, Rec facilities.; WF & ed.; Bus. dev.
Cleveland, MS (3)	Market new bus.; Bus. ed.; Expand exist bus.; SOA Train facility

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

Is the Internet Changing Everything?

Arkansas: In the three communities, 85% said yes. "We have shifted from the industrial age to the information age … [the] Internet is bringing together a world-wide community." 12% said no. "Basic human needs can not be replaced by technology…our modes of work change, but much of human behavior will go on as it has."

Delhi, LA: Evenly divided responses "Internet influences the way companies and people gather information and conduct business," others said "it's not being used extensively enough to impact all things."

Tallulah, LA: Majority response was "Internet is changing the speed and opportunity of business … has created unlimited opportunity for rural areas," but "people must still be motivated to help themselves to what our country offers."

Monroe/W. Monroe, LA: Majority agreed, "Hardly anything has escaped the influence of the Internet…E-Commerce has problems but they are being resolved."

Greenwood, MS: Majority agreed, "the Internet brings resources, choices and information and education to isolated places," but "it does change our basic needs."

Clarksdale, MS: Evenly divided responses, "influences speed and access," but "there is a digital divide…reduces emphasis on manual labor and affects kinds of jobs."

Cleveland, MS: Majority agreed, "It forces businesses to analyze production, markets & distribution," but, "people who don't use it may not know their world is changing."

Physical Infrastructure Technology Resource Gaps

Community	Physical Infrastructure Needs
Dumas, AR (1)	Cost-effective high-speed communication and information technology; 4-lane highways
Helena, AR (2)	Cost-effective high-speed communication and information technology
Monticello, AR (3)	Cost-effective high-speed communication and information technology; a community infrastructure plan
Delhi, LA (1)	Cost-effective high-speed communication and information technology; roads
Tallulah, LA (2)	Cost-effective high-speed communication and information technology; Rail spur - KCS RR to Port

Monroe / W. Monroe, LA (3)	Cost-effective high-speed communication and information technology; cost-effective airline service; N/S 4-lane
Greenwood, MS (1)	Cost-effective high-speed communication and information technology; Roads (N/S 4-lane; NE link); housing; commercial airline; conference/events facility
Clarksdale, MS (2)	Cost-effective high-speed communication and information technology; parks & rec. facilities; rail; renovate airport/strip
Cleveland, MS (3)	Cost-effective high-speed; longer airstrip; E/W route; housing, spec. building; workforce training facility

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

Soft Infrastructure Technology Resource Gaps

Arkansas	Workforce Development (pipeline & current); Race Relations; Community Strategic Plan
Delhi, LA (1)	Need improvements for public schools; Leadership dev. programs; youth programs; increased volunteerism
Tallulah, LA (2)	Need improvements for public schools
Monroe / W. Monroe, LA (3)	Workforce training & better coordination with business needs; technical education in secondary schools
Greenwood, MS (1)	Cultural & recreational events/facilities; Flexible daycare; workforce training (pipeline/current technical training)
Clarksdale, MS (2)	Flexible daycare; youth programs/facilities; cultural & recreational events/facilities; workforce development (industrial/technical)
Cleveland, MS (3)	Flexible daycare; youth programs/facilities; cultural/rec. entertainment events/facilities; workforce dev. (bus., technical)

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

Entities with Perceived High Community Inter-Connectivity

Dumas, AR (1)	City, Banks, Chamber of Commerce
Helena, AR (2)	Banks, Helena Medical Center, Insurance Companies
Monticello, AR (3)	Banks, Timberland Enterprises, Accounting Firms
Delhi, LA (1)	Tifton Aluminum, Easy Way, Dumas Candy, Bellsouth, hospital
Tallulah, LA (2)	Utility providers, Louisiana Technical College, Banks, Delta CDC, API
Monroe / W. Monroe, LA (3)	Not Available
Greenwood, MS (1)	Sports, Volunteer & ED Orgs; Restaurants; Bell South; Banks; Hospital; K-12 schools; Viking Range; Utility providers
Clarksdale, MS (2)	Coahoma Community Col.; Chamber & Industrial Found.; Banks; Clarksdale Utilities; Medical Center; Community Health Center

Cleveland, MS (3)	Delta State Univ.; K-12 schools; Miss. Delta Com. Col.; BellSouth; Medical Center; Entergy; Chamber Team Cleveland; MESC

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

Case Studies

Case studies captured the perspectives of companies identified through the Community Technology Assessments. The case studies identified firms with significant successes and significant challenges and affirmed many of findings from the Community Technology Assessments.

Accessing Technology Conference

- National program developed by ASME
- Purpose: to raise awareness of technology-based economic development resources & showcase best practices
- Focus is on communities and businesses
- TEAM DelTA is first multi-state effort

Internet-based Learning Modules

- Web-based management and training tool
- Content
  - Introductory/informational
  - Motivational
  - How-to
  - Reference
- Will form basis for a Learning Network

Internet-based Learning Modules

- Introduction – how to get the most out of the modules
- Brief Economic History of the US – New Economy
- Building Community Competitive Advantage
- The 21st Century: Seeing the Future
- Laying the Groundwork for a Community Technology Assessment (CTA)
- How to Conduct a CTA
- How to Conduct a CTA
- Next Steps: Strategic Action Planning - Implementation
- Federal/State Products/Services to Assist Communities
- Measuring Community Progress

Some Suggestions for Next Steps

Community	Next Steps
Dumas, AR (1)	Bandwidth development
Helena, AR (2)	Further develop community's social capital

Monticello, AR (3)	Explore new business opportunities related to Maxwell Hardwood Flooring; utilize UAM & its library
Delhi, LA (1)	Market area to retirees; Improve CIT (Community Information Technology) infrastructure
Tallulah, LA (2)	Rail spur renovation; Improve CIT Infrastructure
Monroe / W. Monroe, LA (3)	Strengthen coordination between businesses, LTC & high schools; promote technical ed.; CIT Infrastructure
Greenwood, MS (1)	Develop a community technology plan (includes CIT infrastructure issues, technology training needs, aggregate demand)
Clarksdale, MS (2)	Develop a community technology plan (includes CIT infrastructure issues, technology training needs, aggregate demand)
Cleveland, MS (3)	Develop a community technology plan (includes CIT infrastructure issues, technology training needs, aggregate demand)
(1) Communities with no higher education resources. (2) Communities with two-year college. (3) Communities with four-year campus.	

Administrative Tips (If I did it again)

- Things to aim for
  - Method, Logistics, Community Support
- Things to look out for (things not to do)

To Wrap Up

- Delta Unique Geographic Region – rich culture
- Challenges are similar to those facing others
- Many are working to meet the Challenges
- Difference can be made through
  - Thoughtful **Assessment**
  - Action **Planning**
  - Commitment from broad-based group of individuals in your Community
  - Seeking assistance & expertise from resources
- Follow-through is everything – **Implementation**

3. Technology-based Economic Development Workshops

Three Technology-based Economic Development Workshops were held, one in each state as follows:

- Arkansas: May 2, 2000 in Monticello.
- Louisiana: June 8, 2000 in West Monroe.
- Mississippi: May 23, 2000 in Cleveland.

The typical agenda for the half-day meetings included the following items:

- Registration
- Welcome
- Overview and Introductions (The project Overview is summarized in section 2.)
- Opening Remarks
- Building Community Competitive Advantage (See Module 4 in the Appendix.)
- Seeing the Future (See Module 3 in the Appendix.)
- Panel Discussion
- Closing Remarks
- Adjourn

The Arkansas Science & Technology Authority, Louisiana Partnership for Technology and Innovation, and Mississippi's Institute for Technology Development conducted the Workshops in their respective states, often with the support of other state agencies. Regional Technology Strategies and the Southern Technology Council contributed important content to Workshop presentations. Other TEAM Delta Partners, including Entergy and Southwestern Bell, financially supported, and participated in, the Workshops.

The workshops were the first tangible efforts of the TEAM Delta project and preceded the Community Technology Assessments.

4. Community Technology Assessments

Nine Community Technology Assessments were conducted, in three communities in each of the three states. The communities in which assessments were conducted were selected to provide a cross section of Delta communities based on the kind of higher-education resources available in the community. In each state, one community was selected because it had no higher education resources; one was selected because it had a two-year or community college; and one was selected because it had a four-year university campus.

The Arkansas Science & Technology Authority, Louisiana Partnership for Technology and Innovation, and Community Technology Solutions, a division of Mississippi's Institute for Technology Development, conducted the Assessments.

Community Technology Assessments

Community	Date of Assessment	**Page Number for the Community Technology Assessment**
Dumas, AR (1)	October 25, 2000	
Helena, AR (2)	June 14, 2000	
Monticello, AR (3)	June 20, 2000	
Delhi, LA (1)	September 7, 2000	

Tallulah, LA (2)	September 14, 2000	
Monroe **W. Monroe, LA** (3)	December 5, 2000	
Greenwood, MS (1)	July 12, 2000	
Clarksdale, MS (2)	August 16, 2000	
Cleveland, MS (3)	August 7, 2000	

(1) Communities with no higher education resources.
(2) Communities with two-year college.
(3) Communities with four-year campus.

The process used to conduct the Community Technology Assessment is contained in ***Asynchronous Learning Modules*** presented in the Appendix. The TEAM Delta Project Overview, presented in section two, is based on the Assessments.

The following pages summarize and illustrate the nine Community Technology Assessments. These Assessments were distributed at the ***Delta Region Accessing Technology Conference.***

Dumas/Desha County, Arkansas

Dumas/Desha County Community Profile

Dumas is located in Desha County, Arkansas on the west bank of the Mississippi River in a region called the Mississippi River Delta. Much of the information for the area is available at the county level, and it comes from a variety of sources compiled in different years.

Agriculture is important to the county, which produces cotton, rice, soybeans and corn. In 1997, the county ranked 27th in the nation in rice production and 23rd in cotton.

Manufacturing, services, and retail trade, which have the largest numbers of employees, drive the non-farm economy of Desha County. In 1997, there were 4,824 employees in the county, 34 percent in manufacturing, 26 percent in services, and 21 percent in retail trade. The comparison to Arkansas is shown in the following Table.

Employees	Drew Co.	Arkansas
Manuf'ing	34%	27%
Services	26%	29%
Retail Trd.	21%	22%

There were 403 establishments in Desha County in 1997, with 29 percent in retail trade and 29 percent in services. None of the establishments employed more than 500 persons; 91 percent of them employed fewer than 20 persons.

Estabmts.	Drew Co.	Arkansas
Retail Trd.	29%	26%
Services	29%	34%
Manuf'ing	4%	7%

The population of Desha County was estimated at 14,855 on July 1, 1999, down 1.5 percent from the year before. Population was down 9.2 percent from 1990 to 1997. In 1996, the population was 54.4 percent white and 45.1 percent black.

Educational attainment in Desha County, for persons 25 years and over in 1990, was 56.5 percent for high school graduates (compared to 66.3 percent for the state) and 10.4 percent for college graduates (compared to 16.1 percent for the state).

Per capita income in Desha County was $10,996 in 1990 ($13,784 for the state) and $14,901 in 1994 ($16,863 for the state).

The Arkansas Workshop

Based on the TEAM Delta workshop held in Monticello, Arkansas on May 2, 2000, the current major issues in Desha, Drew, and Phillips Counties include:

- Education,
- Connectivity,
- Visionary leadership,
- Industry, and
- Loss of population.

Participants in the workshop also identified barriers and opportunities.

Obstacles

Major obstacles appear to be:

- **education** in general;
- **social capital**, including lack of trust (or teamwork, cooperation, or collaboration) and racial barriers; and
- **vision**, described variously as the belief that things can be different and better, seeing a way out of poverty, thinking outside the box, positive attitude, direction, good image, and not being resistant to change.

Opportunities

Major Opportunities include:

- **Natural resources;**
- **Sense of community** built around a good location, small town atmosphere, and emerging community leadership; and
- **New opportunities**, including eco-tourism, new markets, technology, micro-enterprise, changes in education, investments in people, distance learning, and the ability to influence what is going on.

Workshop Evaluation

A follow-up evaluation/survey of workshop participants revealed community impressions about the topics offered at the workshop. The topics generally addressed how to create more local wealth and higher paying jobs, and information about the new technology-based economy. Dumas participants in the Arkansas workshop viewed the topics in the following way:

Highly Useful

- Science & Technology
- Workforce
- Social Capital

Average Usefulness

- Value-Added
- Clusters and Networks
- International Trade
- Venture Finance
- Service Economy

Low Usefulness

- Entrepreneurs
- Time-to-Market

The evaluation/survey also measured the popularity of strategies for technology-based economic development. Dumas participants in the Arkansas workshop assessed a list of strategies, as shown below:

Most Popular

- Improving K-12
- Industrial Networks

Some Popularity

- Entrepreneurial Education
- Tech Business Incubator
- Community Technology Plan
- Research Park

Little Popularity

- Angel Investor Network
- Focused Recruitment
- University Tech Transfer

Not Rated

- Manufacturing Extension
- Tech Focused Training

The Dumas Community Technology Assessment was held October 25, 2000. Nine community residents participated. The session began with introductions followed by the TEAM Delta facilitator asking three questions concerning their attitudes about different kinds of investments.

The first question asked participants to assume that they had $100 to spend on the following three things: (a) recruiting businesses to the community, (b) assisting existing business to expand, and (c) helping new, start-up businesses. The $100 could be divided among the three things in any proportion desired. The Dumas participants (n=5) allocated their collective $500 for existing firms ($230), recruiting ($165), and start-up companies ($105).

The second question asked participants to assume that they had $100 to spend on the following three things: (a) education, training, and human resource development, (b) technology transfer and development, and (c) capital investments. The $100 could be divided among the three things in any proportion desired. The participants (n=4) allocated their collective $400 for education ($165), technology ($145), and capital investment ($90).

The third question was whether they agreed or disagreed with the statement that the Internet was changing everything. Four agreed and added unsolicited comments indicating that Internet banking is the way of the future and that most things can now be done on the Internet without having to leave the house. One person disagreed, explaining that we have to maintain personal relationships. One person indicated having no contact with the Internet.

These warm-up questions were followed by discussion and compiling four lists of technology resources.

Discussion about key firms, those adding value, exporting, and paying higher wages, led to the following list: Arkat Feeds, Akin Industries, Federal Mogul, Dumas Cotton Gin, and Leer.

Discussion about business partners that contribute to the success of key firms generated the following list: the city, the Chamber of Commerce, banks, the phone company, and Delta Memorial Hospital.

The discussion about soft infrastructure resources (e.g., schools, medical clinics, etc.) in the community resulted in the following list: public schools, Great River Vo-tech school, Dumas Adult Education, Dumas Community Foundation, and Main Street Dumas, Inc.

A Community Profile provided by the Arkansas Community of Excellence program at the Arkansas Department of Economic Development assisted the discussion about the hard infrastructure resources of the community. Dumas' infrastructure needs include both traditional and new infrastructure. Regarding traditional infrastructure, four-lane highways are needed to Pine Bluff to the North, to the Louisiana state line to the South, and to the Mississippi state line to the East. New infrastructure needs revolve around increasing bandwidth to the community and the schools. Cost of bandwidth is a concern. Starting a new business in Dumas is arduous if connectivity is an issue. The bandwidth issue is complicated because Dumas is geographically located between the service territories of Southwestern Bell and Century Tel.

The closing question for the group was what they wanted Dumas to be known for five years from now. Participants generally wanted to see their community as being progressive and with technologically advanced schools. They said, I want Dumas to be known for:

- Being a very progressive, exciting and inviting town!
- Children coming from the best (technologically-advanced) school system.
- Working together through all barriers including racial, socio-economic, etc., and becoming a highly progressive community.
- Its friendly people.
- The ability to change and grow with changes in the economy and technology.

During the Dumas community technology assessment, participants were asked to estimate the "connectivity" among the various organizations they identified among key, firms, business partners, and the community's soft infrastructure. Their responses indicate their collective opinion that the most interconnected resources in their community are city government, banks, and the Chamber of Commerce.

Next Steps

Participants identified bandwidth development as an implementation opportunity.

Helena/Phillips County, Arkansas

Helena/Phillips County Community Profile

Helena and West Helena are located in Phillips County, Arkansas on the West bank of the Mississippi River in a region called the Mississippi River Delta. Much of the information for the area is available at the county level, and it comes from a variety of sources compiled in different years.

Agriculture is important to the county, which produces cotton, rice, soybeans, corn, and sorghum. In 1997, the county ranked 69th in the nation in the production of soybeans, 46th in rice, and 25th in cotton.

The non-farm economy of Phillips County is driven by services, retail trade, and manufacturing, which have the largest numbers of employees. In 1997, there were 6,020 employees in the county, 27 percent in services, 26 percent in retail trade, and 17 percent in manufacturing. The comparison to Arkansas is shown in the following Table.

Employees	Phillips Co.	Arkansas
Services	27%	29%
Retail Trd.	26%	22%
Manuf'ing	17%	27%

There were 567 establishments in Phillips County in 1997, with 33 percent in retail trade and 32 percent in services. None of the establishments employed more than 500 persons; 88 percent of them employed fewer than 20 persons.

Estabmts.	Phillips Co.	Arkansas
Services	32%	34%
Retail Trd.	33%	26%
Manuf'ing	4%	7%

The population of Phillips County was estimated at 27,049 on July 1, 1999, down 0.9 percent from the year before. Population was down 4.2 percent from 1990 to 1997. In 1996, the population was 42 percent white and 57.1 percent black.

Educational attainment in Phillips County, for persons 25 years and over in 1990, was 51.5 percent for high school graduates (compared to 66.3 percent for the state) and 9.2 percent for college graduates (compared to 16.1 percent for the state).

Per capita income in Phillips County was $10,729 in 1990 ($13,784 for the state) and $13,523 in 1994 ($16,863 for the state).

The Arkansas Workshop

Based on the TEAM Delta workshop held in Monticello, Arkansas on May 2, 2000, the current major issues in Phillips, Drew, and Desha Counties, Arkansas, include:

- Education,
- Connectivity,
- Visionary leadership,
- Industry, and
- Loss of population.

Participants in the workshop also identified barriers and opportunities.

Obstacles

Major obstacles appear to be:

- **education** in general;
- **social capital**, including lack of trust (or teamwork, cooperation, or collaboration) and racial barriers; and
- **vision**, described variously as the belief that things can be different and better, seeing a way out of poverty, thinking outside the box, positive attitude, direction, good image, and not being resistant to change.

Opportunities

Major Opportunities include:

- **Natural resources;**
- **Sense of community** built around a good location, small town atmosphere, and emerging community leadership; and
- **New opportunities**, including eco-tourism, new markets, technology, micro-enterprise, changes in education, investments in people, distance learning, and the ability to influence what is going on.

Workshop Evaluation

A follow-up evaluation/survey of workshop participants revealed community impressions about the topics offered at the workshop. The topics generally addressed how to create more local wealth and higher paying jobs, and information about the new technology-based economy. Helena participants in the Arkansas workshop viewed the topics in the following way:

Highly Usefulness

- Value-Added
- Clusters and Networks
- Science & Technology
- Venture Finance
- Entrepreneurs
- Social Capital

Average Usefulness

- International Trade
- Traded Sector

Low Usefulness

- Traded Sector
- Workforce
- Time-to-Market

The evaluation/survey also measured the popularity of strategies for technology-based economic development. Helena participants in the Arkansas workshop assessed a list of strategies, as shown below:

Most Popular

- University Tech Transfer
- Industrial Networks

Some Popularity

- Tech Business Incubator
- Research Park

Little Popularity

- Angel Investor Network

Not Rated

- Manufacturing Extension
- Tech-focused Training
- Focused Recruitment
- Entrepreneurial Education
- Community Technology Plan
- Improving K-12

The Community Technology Assessment

The Helena Community Technology Assessment was held June 14, 2000. Sixteen community residents participated. The session began with introductions followed by the TEAM Delta facilitator asking three questions concerning their attitudes about different kinds of investments.

The first question asked participants to assume that they had $100 to spend on the following three things: (a) recruiting businesses to the community, (b) assisting existing business to expand, and (c) helping new, start-up businesses. The $100 could be divided among the three things in any proportion desired. The Helena participants allocated their collective $1600 in roughly equal amounts for start-up companies ($555), existing firms ($535), and recruiting ($510).

The second question asked participants to assume that they had $100 to spend on the following three things: (a) education, training, and human resource development, (b) technology transfer and development, and (c) capital investments. The $100 could be divided among the three things in any proportion desired. The participants allocated their collective $1599 in roughly equal amounts for education ($578) and technology ($568), with less allocated for capital investment ($463).

The third question was whether they agreed or disagreed with the statement that the Internet was changing everything. Fifteen agreed. Several participants added unsolicited comments such as the following, “We have shifted from the industrial and agricultural age into the information age.” Only one person disagreed.

These warm-up questions were followed by discussion and compiling four lists of technology resources.

Discussion about key firms, those adding value, exporting, and paying higher wages, led to the following list: Hoffinger Industry, H&M Lumber Co., agricultural chemical firms (e.g., Norac, Co.), Crowley Ridge Aviation, and river operations.

Discussion about business partners that contribute to the success of key firms generated the following list: banks and investment companies, insurance companies, and one civil engineering firm.

The discussion departed from the expected as the group tackled the list of soft infrastructure resources (e.g., schools, medical clinics, etc.). "I think we are trying to compete by using only half of our resources," one participant began, and launched an honest, hour-long discussion about race and the role it plays in the community's image and economic development activities. Several opportunities for the community evolved from the discussion. Though unplanned, and not directly related to technology, the discussion was the single most important topic discussed. At one point in the discussion about race, the facilitator told the story about Trent Williams' cocktail party conversation with an economist about uneven economic development in post World War II Italy. The conclusion to the story is that the communities that did better economically had more choral societies and football teams, which served as forums for communication and proved to have value that the economist called social capital. Trent elaborates on this by pointing out that this is a new kind of capital. It is based on economic and civic relationships. When a region has social capital, information spreads quickly, accurately, and efficiently. The familiarity creates a foundation of trust and expectation of reciprocity.

The facilitator further observed that a day earlier a resident had indicated that for four days each year the community sets aside its differences for the blues festival. This is a form of social capital.

A Community Profile provided by the Arkansas Community of Excellence program at the Arkansas Department of Economic Development assisted discussion about the hard infrastructure resources of the community. Participants thought that Helena’s traditional infrastructure was substantial. The only future need they identified was telecommunications infrastructure that is needed for future economic development.

The closing question for the group was what they wanted Helena to be known for five years from the date of the assessment. Answers focused on Helena’s people and a prosperous community, with economic opportunities for all, and an outstanding quality of life. Several examples follow; “I want Helena to be known for:

- A stable community with a good quality of life, which includes jobs, educational opportunities and other factors that make people want to live and work in the area.
- A people coming together, who live and work together, making their community better.
- A culturally diverse community with excellent opportunities in education, communications, distribution and agriculture.

- A community in which people in general, feel that they have a stake in and can contribute to making the area and their families prosper."

A follow-up mail survey was conducted. Participants in the Helena community technology assessment were asked to estimate the "connectivity" among the various organizations they identified among key, firms, business partners, and the community's soft infrastructure. Their responses indicate their collective opinion that the most interconnected resources in their community are banks, the Helena Medical Center, and insurance companies.

Next Steps

Opportunities include planning further development of the community's social capital.

Arkansas Science &
Technology Authority

1/25/01

Monticello/Drew County, Arkansas

Monticello/Drew County Community Profile

Monticello is located in Drew County, Arkansas one county west of the Mississippi River in a region called the Mississippi River Delta. Much of the information for the area is available at the county level, and it comes from a variety of sources compiled in different years.

Agriculture is important to the county, which produces soybeans and timber.

The non-farm economy of Drew County is driven by *services, retail trade, and manufacturing,* which have the largest numbers of employees. In 1997, there were 6,884 employees in the county, 42 percent in manufacturing (including lumber and saw mills), 25 percent in services, and 20 percent in retail trade. The comparison to Arkansas is shown in the following Table.

Employees	Drew Co.	Arkansas
Manuf'ing	42%	27%
Services	25%	29%
Retail Trd.	20%	22%

There were 454 establishments in Drew County in 1997, with 30 percent in retail trade and 28 percent in services. Two of the establishments employed more than 500 persons; 68 percent of them employed fewer than 20 persons.

Estabmts.	Drew Co.	Arkansas
Retail Trd.	30%	26%
Services	28%	34%
Manuf'ing	14%	7%

The population of Drew County was estimated at 17,449 on July 1, 1999, down 0.1 percent from the year before. Population was up 2.1 percent from 1990 to 1997. In 1996, the population was 69.8 percent white and 29.9 percent black.

Educational attainment in Drew County, for persons 25 years and over in 1990, was 63.1 percent for high school graduates (compared to 66.3 percent for the state) and 13.9 percent for college graduates (compared to 16.1 percent for the state).

Per capita income in Drew County was $11,374 in 1990 ($13,784 for the state) and $14,682 in 1994 ($16,863 for the state).

The Arkansas Workshop

Based on the TEAM Delta workshop held in Monticello, Arkansas on May 2, 2000, the current major issues in Drew, Phillips, and Desha Counties include:

- Education,
- Connectivity,
- Visionary leadership,
- Industry, and
- Loss of population.

Participants in the workshop also identified barriers and opportunities.

Obstacles

Major obstacles appear to be:

- **education** in general;
- **social capital**, including lack of trust (or teamwork, cooperation, or collaboration) and racial barriers; and
- **vision**, described variously as the belief that things can be different and better, seeing a way out of poverty, thinking outside the box, positive attitude, direction, good image, and not being resistant to change.

Opportunities

Major Opportunities include:

- **Natural resources;**
- **Sense of community** built around a good location, small town atmosphere, and emerging community leadership; and
- **New opportunities**, including eco-tourism, new markets, technology, micro-enterprise, changes in education, investments in people, distance learning, and the ability to influence what is going on.

Workshop Evaluation

A follow-up evaluation/survey of workshop participants revealed community impressions about the topics offered at the workshop. The topics generally addressed how to create more local wealth and higher paying jobs, and information about the new technology-based economy. Monticello participants in the Arkansas workshop viewed the topics in the following way:

Highly Useful

- Value-Added
- Social Capital
- Science & Technology
- Entrepreneurs
- Workforce
- Clusters and Networks
- Venture Finance

Average Usefulness

- Traded Sector
- Time-to-Market

Low Usefulness

- International Trade
- Service Economy

The evaluation/survey also measured the popularity of strategies for technology-based economic development. Monitcello participants in the Arkansas workshop assessed a list of strategies, as shown below:

Most Popular

- Community Technology Plan
- Industrial Networks
- University Tech Transfer
- Tech-focused Training
- Improving K-12
- Manufacturing Extension

- Entrepreneurial Education

Some Popularity

- Tech Business Incubator
- Focused Recruitment
- Angel Investor Network

Little Popularity

- Research Park

The Community Technology Assessment

The Monticello Community Technology Assessment was held June 20, 2000. Eleven community residents, members of Monticello's Network Planning Committee, participated. The session began with introductions followed by the TEAM Delta facilitator asking three questions concerning their attitudes about different kinds of investments.

The first question asked participants to assume that they had $100 to spend on the following three things: (a) recruiting businesses to the community, (b) assisting existing business to expand, and (c) helping new, start-up businesses. The $100 could be divided among the three things in any proportion desired. The Monticello participants allocated their collective $1100 for recruiting ($410), start-up companies ($375), and existing firms ($315).

The second question asked participants to assume that they had $100 to spend on the following three things: (a) education, training, and human resource development, (b) technology transfer and development, and (c) capital investments. The $100 could be divided among the three things in any proportion desired. The participants allocated their collective $1100 for education ($555), technology ($400), and much less ($145) allocated for capital investment.

The third question was whether they agreed or disagreed with the statement that the Internet was changing everything. Nine of the 11 agreed and added unsolicited comments indicating that the process of exchanging information and access to new information is enhancing learning, "It's changing the way we learn, do business, entertain," and "Because the internet is bringing us together as a world wide community. Two persons disagreed, explaining, "Basic human needs involving emotions, feelings, etc. cannot be replaced by technology," and "It changes our modes of communication/ work and affects some behavior patterns; much of human behavior will go on as it has."

These warm-up questions were followed by discussion and compiling four lists of technology resources.

Discussion about key firms, those adding value, exporting, and paying higher wages, led to the following list: Maxwell Hardwoods, Timberland Enterprises, J.B. Price Lumber Company, Seaark Boats, Inc., and War Eagle Boats.

Discussion about business partners that contribute to the success of key firms generated the following list: King wood Forestry, ESA (Employers Services of America), accounting firms, banks, timber sellers/haulers, and trucking/railroads.

The discussion was robust as the group tackled the list of soft infrastructure resources (e.g., schools, medical clinics, etc.) in the community. TEAM Delta used the following five organizations for analytical purposes: MEDC (Monticello Economic Development Commission), University of Arkansas at Monticello, school districts, churches, and the Monticello Adult Education Center.

The preceding list, however, does not fully represent the breadth of the soft infrastructure resources that the participants discussed. Among other unique resources, they discussed Drew Memorial Hospital, hunting and fishing resources, youth sports, the Seaark Concert Association, and the people in the community who are change agents.

A Community Profile provided by the Arkansas Community of Excellence program at the Arkansas Department of Economic Development assisted the discussion about the hard infrastructure resources of the community. Monticello's infrastructure needs include:

1. Land for sewer and water expansion (which are outside the community) and more water lines out of the city;
2. Telecommunications infrastructure, redundancy in connectivity, more bandwidth;
3. Improved air service and a longer runway;
4. A civic center;

5. A strategic plan for infrastructure;
6. More public transportation (they recognize that the demand is relatively small);
7. Ponds from which to draw water for rural fire protection (this is outside the city);
8. Shopping infrastructure; and
9. Housing (especially rental housing).

The closing question for the group was what they wanted Monticello to be known for five years from now. Answers focused on Monticello as a progressive community and a hub in Southeast Arkansas for healthcare and technology. Another theme was educational excellence. Several examples follow; I want Monticello to be known for:

- Its leisure and recreation aspects while growing business and industry. Expanding homegrown companies is a better way of keeping jobs here. Focus recruiting on higher paying jobs, not assembly types, to have more to offer to college graduates and keep people here in Monticello.
- Higher wages and higher retention of high school and college graduates.
- Entrepreneurial support and economic opportunity.
- City/county/state connectivity.
- My vision for Monticello in five years, I would like to have an abundance of opportunities; business, educational, personal and otherwise.

A follow-up mail survey was conducted. Participants in the Monticello community technology assessment were asked to estimate the "connectivity" among the various organizations they identified among key, firms, business partners, and the community's soft infrastructure. Their responses indicate their collective opinion that the most interconnected resources in their community are banks, Timberland Enterprises, and accounting firms.

Next Steps

Participants identified numerous implementation opportunities, including:

- Tomato growing industry offers value-added opportunities.
- There is an opportunity for a new business or two associated with Maxwell Hardwood Flooring.
- University of Arkansas at Monticello seems to be an underutilized resource, especially its library.
- More grad studies at UAM.
- Need shopping. People leave to go shopping/fine dining.

Louisiana Partnership For

Technology & Innovation

1/25/01

Delhi, Louisiana

Delhi – Richland Parish Community Profile

Delhi is located in Richland Parish in northeast Louisiana in a region called the Mississippi River Delta.

Although Richland Parish is steeped in agrarian history and agriculture continues to be important, the non-farming private sector economy of Richland Parish is driven by manufacturing, retail trade, and services. In 1998 there were an estimated 6,750 full-time and part-time employees in the parish, with approximately 42 percent in services, 21 percent in retail, and 13 percent in manufacturing. The comparison to Louisiana is shown in the following table:

Employees	Richland Parish	Louisiana
Services	42%	36%
Retail Trade	21%	22%

Manuf'ing	13%	12%

There were 431 establishments in Richland Parish in 1997, with 37 percent in services, 23 percent in retail trade, and four percent in manufacturing. None of the establishments employed more than 500 persons, and 90 percent of the establishments employed fewer than 20 persons.

Estab'ments	Richland Parish	Louisiana
Services	37%	37%
Retail Trade	23%	24%
Manuf'ing	4%	4%

In 1998, the population of Richland Parish was estimated at 21,040 with about 32 percent employed full-time or part-time.
Population decreased approximately 2 percent between 1988 and 1998. In 1999, the population was estimated to be 61 percent white and 39 percent black.

The unemployment rate averaged 8.0 percent in 1999, compared to 5.1 percent for the state as a whole.

Educational attainment in Richland Parish, for persons 25 years and over in 1990, was 31 percent for high school graduates (compared to 40 percent for the state) and 6 percent for college graduates (compared to 9 percent for the state).

Per capita income for Richland Parish was $10,415 in 1988 ($13,113 for the state) and $15,940 in 1998 ($22,206 for the state).

The Louisiana Workshop

The TEAM Delta workshop, held in West Monroe, Louisiana, on June 8, 2000, offered information about how to create more local wealth and higher-paying jobs and about the new technology-based economy. Participants identified issues facing Madison, Ouachita, and Richland, parishes, including:

- Education & training;
- Financing;
- Cooperation, community spirit, and vision; and
- Loss of population.

Participants in the workshop also identified obstacles and opportunities.

Obstacles

Major obstacles appear to be:

- Workforce (lack of technically capable workforce, training opportunities, and work ethic, and the out-migration of skilled employees
- Lack of access to financial capital
- Lack of social capital (social contacts, cooperation, & spirit)
- Lack of vision (thinking outside the box, positive attitude, and not being resistant to change.

Opportunities

Major opportunities include:

- **Workforce** (the opportunity to train and more fully utilize existing people and better utilize area technical colleges & the university to provide academic & technical skills)
- **Quality of life** built around a good location, small town atmosphere, and emerging community leadership;
- **Available resources** (including transportation infrastructure, utilities, natural resources); and
- **New opportunities**, including Internet marketing that provides the opportunity to compete globally,

value-added exporting, improvements in education, and technology

Workshop Evaluation

The written evaluation of the workshop showed that of the topics covered in the workshop, those ranked highly useful were:

- Value added;
- The role of technology; and
- Social capital.

The topics rated least useful were clusters & networks and traded sectors.

The evaluation also sought to determine the extent to which attendees had been involved in planning and plan implementation in their communities. Results showed that there has been very little action planning by seminar participants. By far the most planning was in the area of K-12 education, followed by tech-focused training, and focused recruitment. Research parks and angel investor networks have received the least attention.

The Community Technology Assessment

The Delhi Community Technology Assessment was held September 7, 2000. Eleven community residents participated. The session began with introductions followed by the TEAM Delta facilitator asking three questions concerning their attitudes about different kinds of investments.

The first question asked participants to assume that they had $100,000 to spend on the following three things: (a) recruiting businesses to the community, (b) assisting existing business to expand, and (c) helping new, start-up businesses. The $100,000 could be divided among the three things in any proportion desired.

The Delhi participants would invest 37 percent in existing businesses, 37 percent in new businesses, and 27 percent for recruiting.

The second question asked participants to assume that they had $100,000 to spend on the following three things: (a) education, training, and human resource development, (b) technology transfer and development, and (c) capital investments. The $100,000 could be divided among the three things in any proportion desired. The participants would invest roughly equal amounts in each of the three areas, with 35 percent in workforce & education, 33 percent in capital investment, and 32 percent in technology.

The third question was whether they agreed or disagreed with the statement that the Internet was changing everything. Responses were about evenly divided, with six responding "yes" and five responding "no." Several of the participants responding in the negative acknowledge that the Internet has an impact; they simply don't believe it is having a large impact. "It is not being used as extensively as would be necessary to impact 'all things' or 'everything,'" However, other participants strongly believe that the Internet influences the way companies and individuals gather information and conduct business and that influence will continue to increase.

These warm-up questions were followed by discussion and compiling four lists of technology resources.

Discussion about key firms -- those adding value, exporting, and paying higher wages -- led to the following list: Tifton Aluminum, Easy Way, Delta Phone, Duracraft, Dumas Candy, Dawson Farms, Southern Produce, Louisiana Uniforms, UPS Shipping Center, and a clothing distribution center.

Discussion about business partners that contribute to the success of key firms generated the following list: Riverwood in Monroe (boxes) and box board manufacturers in Monroe; small, independent, local pallet companies; legal, accounting, computer services – Rayville; Bayou Internet; local utilities – LA Gas, BellSouth, Entergy, and City of Delhi (water, sewer).

The discussion quickly became focused on soft infrastructure

There was extensive discussion of problems with K-12 education and how that affects businesses keeping and recruiting good employees, as well as residents wanting to stay. Participants agreed that the poor public school system is driving people to other towns -- "till we can fix the schools, we're going to have a hard time."

Other problems and gaps identified include too few activities and groups to develop community social capital, including:

- **No event, place, or organization where everyone in the community gets together (used to be the schools, but schools are in bad shape).**
- No volunteer network

- No job service or training; must go to Tallulah or Winnsboro for technical college
- No local leadership programs
- No chamber of commerce (which often spearheads leadership programs for youth)
- No local newspaper; so little consistent news getting around, and there's no easy way for businesses to advertise locally. Community paper is done by high school students.
- FFA is almost non-existent in the parish

Delhi does have a civic center, a public country club with a golf course, and the Northeast Livestock Show. Also, the local hospital seems fairly progressive, having organized a network of 8 north Louisiana hospitals that have combined purchasing and are looking at other things to do together. The hospital would also like to do more preventative health care, which would be an asset (as is the hospital) to a developing destination resort and possibly a retirement community at the nearby Poverty Point Reservoir.

Implementation Opportunities

Participants identified a number of areas for implementation or more detailed planning, including:

- Improve the public schools. This is a difficult problem throughout the country and has no easy solutions. It is clear that the local school board continues to work to improve the schools.
- Market the area as a top-notch, rural location for retirees and others to live, as a result of the Poverty Point Reservoir project being developed as a destination resort, the relatively large, progressive community hospital, and the location between and with easy access to Monroe and Vicksburg.
- Improve access to high speed telecommunications technologies to benefit existing businesses and because residents and retirees considering moving to the area because of the new reservoir development will require such access.
- Create a chamber of commerce or other economic development organization to focus on economic development (including development opportunities as a result of the reservoir), as well as addressing gaps in soft infrastructure (e.g., leadership programs, volunteerism) and hard infrastructure, specifically telecommunications.

Data Sources: Bureau of Economic Analysis, Bureau of the Census, & the Louisiana Department of Labor

Louisiana Partnership For

Technology & Innovation

1/25/01

Monroe/West Monroe, Louisiana

Monroe/West Monroe – Ouachita Parish Community Profile

Monroe and West Monroe are located in Ouachita Parish in northeast Louisiana in a region called the Mississippi River Delta.

The nonfarming private sector economy of Ouachita Parish is driven by manufacturing, retail trade, and services. In 1998 there were an estimated 72,973 full-time and part-time employees in the parish, with approximately 33 percent in services, 24 percent in retail, and 15 percent in manufacturing. The comparison to Louisiana is shown below:

Employees	Ouachita Parish	Louisiana
Services	33%	36%
Retail Trade	24%	22%
Manuf'ing	15%	12%

There were 4,070 establishments in Ouachita Parish in 1997, with 24 percent in retail trade and 37 percent in services. The parish has a relatively large number of large employers, with a dozen entities having more than 700 employees each. Still, 86 percent of the establishments employed fewer than 20 persons.

Estab'ments	Ouachita Parish	Louisiana
Services	37%	37%
Retail Trade	24%	24%
Manuf'ing	4%	4%

In 1998, the population of Ouachita Parish was estimated at 146,830, almost half of whom live in Monroe and West Monroe. This is a much more highly populated area than any of the other pilot communities. About 50 percent of the population is employed full-time or part-time. In 1999 the unemployment rate averaged 3.8 percent – substantially below the other Louisiana pilot communities and the state average of 5.1 percent. The population of Ouachita Parish actually increased about 2 percent between 1988 and 1998, making it the only one of the three Louisiana pilot communities to gain in population over that time. In 1996, the population was 42 percent white and 57.1 percent black.

Educational attainment in Ouachita Parish, for persons 25 years and over in 1990, was 40 percent for high school graduates (the same as the state) and 11 percent for college graduates (compared to 9 percent for the state).

Per capita income for Ouachita Parish was $12,484 in 1988 ($13,113 for the state) and $21,230 in 1998 ($22,206 for the state).

The Louisiana Workshop

The TEAM Delta workshop held in West Monroe, Louisiana, on June 8, 2000, offered information about how to create more local wealth and higher-paying jobs and about the new technology-based economy. Participants identified issues facing Madison, Ouachita, and Richland parishes, including:

- Education & training;
- Financing;
- Cooperation, community spirit, and vision; and
- Loss of population.

Participants in the workshop also identified obstacles and opportunities.

Obstacles

Major obstacles appear to be:

- Workforce (lack of technically capable workforce, training opportunities and work ethic, and the out-migration of skilled employees)
- Lack of access to financial capital
- Social capital (lack of social contacts, cooperation, & spirit)
- Vision (thinking outside the box, positive attitude, and not being resistant to change).

Opportunities

Major opportunities include:

- **Workforce (**opportunity to train and more fully utilize existing people & better utilize area technical colleges & university)
- **Quality of life** built around a good location, small town atmosphere, and emerging community leadership;
- **Available resources** (including transportation infrastructure, utilities, natural resources); and

- **New opportunities**, including Internet marketing that provide the opportunity to compete globally, value-added exporting, changes in education, and technology

Workshop Evaluation

The written evaluation of the workshop showed that of the topics covered in the workshop, those ranked highly useful were:

- Value added;
- The role of technology; and
- Social capital.

The topics rated least useful were clusters & networks and traded sectors.

The evaluation also sought to determine the extent to which attendees had been involved in planning and plan implementation in their communities. Results showed that there has been very little action planning by seminar participants. By far the most planning was in the area of K-12 education, followed by tech-focused training, and focused recruitment. Research parks and angel investor networks have received the least attention.

The Community Technology Assessment

The Monroe/West Monroe Community Technology Assessment was held December 5, 2000. Eleven community residents participated. The session began with introductions followed by the TEAM Delta facilitator asking three questions concerning their attitudes about different kinds of investments.

The first question asked participants to assume that they had $100,000 to spend on the following three things: (a) recruiting businesses to the community, (b) assisting existing business to expand, and (c) helping new, start-up businesses. The $100,000 could be divided among the three things in any proportion desired.

The Monroe/West Monroe participants would invest 42 percent in existing businesses, 34 percent in new businesses, and 22 percent for recruiting.

The second question asked participants to assume that they had $100,000 to spend on the following three things: (a) education, training, and human resource development, (b) technology transfer and development, and (c) capital investments. The $100,000 could be divided among the three things in any proportion desired. The participants would invest almost half (48%) in workforce & education, 31 percent in capital investment, and 20 percent in technology.

The third question was whether they agreed or disagreed with the statement that the Internet was changing everything. Only one person disagreed, although admitting that it has changed many things. Several added comments such as: “Hardly anything has escaped the influence of the Internet. E-commerce still has many problems, but they are being resolved. Existing businesses will have to change – make use of technology and the Net.”

In the meetings in the other eight pilot communities, these warm-up questions were followed by discussion and compiling four lists of technology resources. The Monroe meeting, which was the last of the nine Community Technology

Assessment meetings to be held, was well attended by business people. However, the methodology used in the previous meetings in much smaller communities (identifying the main traded sector firms, support firms, soft and hard infrastructure) was difficult to pursue. There were dozens of important traded-sector firms obvious to the participants, who were primarily interested in focusing on the needs of business rather than trying to determine which of many important firms should be on such a list.

The discussion quickly became focused on soft infrastructure – particularly on workforce issues – specifically technical training and the need to begin the training (and begin preparing/educating students & parents that this type of training can lead to good jobs) by secondary school.

Although many of the participants have ties to the University of Louisiana at Monroe (ULM) and strongly support the university, the discussion on workforce needs focused on secondary schools and the technical college and the fact that LTC is not graduating students with the types of skills they need. Most if not all of the participating companies reported that they could grow faster with adequate numbers of skilled employees. Most, though not all, of the companies that attended would fall into the general category known as information technology (IT) companies – i.e., computers, networking, software development, & telecommunications.

Participants also expressed frustration with trying to identify workforce training programs & funds that could be of use to them.

In the area of hard infrastructure, participants report two concerns: telecommunications infrastructure and airline service. The telecommunications infrastructure in place is old. The participants believe that high-speed access will come, but it may take awhile. There is still no DSL service available in the area.

Participants also report that airline service is lacking – though one participant observed that everyone thought the service was good until service at the Jackson International Airport improved substantially.

Implementation Opportunities

Participants identified a number of areas for implementation or more detailed planning, including:

- Improve coordination between LTC & the local business community, so workforce training and technology education course offerings, curricula, & time schedules better meet companies' needs;
- Work to eliminate the disconnect between high schools and technical colleges;
- Promote technical education to high school students and parents – that technical education can lead to respectable jobs with good incomes. Today, only about 20 percent of Louisiana students graduate from college, yet almost all high school education is college prep;
- Improve information available on workforce programs and initiatives (e.g., Incumbent Worker Training Program & apprenticeship programs);
- Help existing businesses understand the benefits technology can bring to them;
- Help existing businesses learn basic technical information about telecommunications & information technology;
- Address gaps in physical infrastructure (roads – N/S 4-lane; commercial airline service; improve telecommunications infrastructure & obtain DSL);
- Develop entrepreneurial skills and resources that support entrepreneurship;
- Help businesses better understand resources available to them at the university (ULM);
- Work to improve the perceptions about the technical capabilities of local companies. Technical capabilities are quite good but perception isn't; and
- Investigate the feasibility of a data center facility – to support existing and new businesses.

Data Sources: Bureau of Economic Analysis, Bureau of the Census, & Louisiana Department of Labor

Tallulah, Louisiana

Tallulah – Madison Parish Community Profile

Tallulah is located in Madison Parish in northeast Louisiana in a region called the Mississippi River Delta.

Although Madison Parish is steeped in agrarian history and agriculture continues to be important, the non-farming private sector economy of Madison Parish is driven by manufacturing, retail and wholesale trade, and services. In 1998 there were an estimated 4,263 full-time and part-time employees in the parish, with approximately 44 percent in services, 24 percent in retail, and 12 percent in wholesale trade. Manufacturing employment accounts for only 7 percent of total employees. The comparison to Louisiana is shown in the following table:

Employees	Madison Parish	Louisiana
Services	44%	36%
Retail Trade	24%	22%
Wh'sle	12%	6%

Trade		
Manuf'ing	7%	12%

There were 230 establishments in Madison Parish in 1997, with 37 percent in services, 26 percent in retail trade, 8 percent in wholesale trade, and 4% in manufacturing.

Estab'ments	Madison Parish	Louisiana
Services	37%	37%
Retail Trade	26%	24%
Wh'sle Trade	8%	8%
Manuf'ing	4%	4%

None of the establishments employed more than 500 persons, and 87 percent of the establishments employed fewer than 20 persons.

In 1998, the population of Madison Parish was estimated at 12,934, with about 33 percent of the population employed full-time or part-time. The population decreased by about 2 percent between 1988 and 1998. In 1999, the population was estimated to be 37 percent white and 63 percent black. The average unemployment rate was 8.3 percent (compared to 5.1 percent in the state).

Educational attainment in Richland Parish, for persons 25 years and over (in 1990), was 29 percent for high school graduates (compared to 40 percent for the state) and 5 percent for college graduates (compared to 9
percent for the state).

Per capita income for Madison Parish was $8,387 in 1988 ($13,113 for the state) and $14,480 in 1998 ($22,206 for the state).

The Louisiana Workshop

The TEAM Delta workshop held in West Monroe, Louisiana, on June 8, 2000, offered information about how to create more local wealth and higher-paying jobs and about the new technology-based economy. Participants identified issues facing Madison, Ouachita, and Richland parishes:

- Education & training;
- Financing;
- Cooperation, community spirit, and vision; and
- Loss of population.

Participants in the workshop also identified obstacles and opportunities.

Obstacles

Major obstacles appear to be:

- Workforce (lack of technically capable workforce, training opportunities and work ethic, and the out-migration of trained/skilled employees
- Lack of access to financial capital
- Social capital (lack of social contacts, cooperation, and spirit)
- Vision (thinking outside the box, positive attitude, and not being resistant to change.

Opportunities

Major opportunities include:

- **Workforce (**opportunity to train & more fully utilize existing people & better utilize area technical colleges & university)
- **Quality of life** built around a good location, small town atmosphere, and emerging community leadership;
- **Available resources** (including transportation infrastructure, utilities, natural resources); and

- **New opportunities**, including Internet marketing that provides the opportunity to compete globally, value-added exporting, improvements in education, and technology

Workshop Evaluation

The written evaluation of the workshop showed that of the topics covered in the workshop, those ranked highly useful were:

- Value added;
- The role of technology; and
- Social capital.

The topics rated least useful were clusters & networks and traded sectors.

The evaluation also sought to determine the extent to which attendees had been involved in planning and plan implementation in their communities. Results showed that there has been very little action planning by seminar participants. By far the most planning was in the area of K-12 education, followed by tech-focused training, and focused recruitment. Research parks and angel investor networks have received the least attention.

The Community Technology Assessment

The Tallulah Community Technology Assessment was held September 14, 2000. Thirteen community residents participated. The session began with introductions followed by the TEAM Delta facilitator asking three questions concerning their attitudes about different kinds of investments.

The first question asked participants to assume that they had $100,000 to spend on the following three things: (a) recruiting businesses to the community; (b) assisting existing business to expand; and (c) helping new, start-up businesses. The $100,000 could be divided among the three things in any proportion desired.

The Tallulah participants would invest 40 percent in existing businesses, 34 percent in new businesses, and 25 percent for recruiting.

The second question asked participants to assume that they had $100,000 to spend on the following three things: (a) education, training, and human resource development; (b) technology transfer and development; and (c) capital investments. The $100,000 could be divided among the three things in any proportion desired. The participants would invest roughly equal amounts in each of the three areas, with 41 percent in workforce & education, 33 percent in capital investment, and 26 percent in technology.

The third question was whether they agreed or disagreed with the statement that the Internet is changing everything. Eighty percent of the participants indicated that the Internet is "changing the speed and opportunity of business," "increases competition by opening markets to anyone with access," and "has created unlimited opportunity for rural and isolated areas of the world." Other participants noted that they are using the Internet more and more every day to gather information, analyze markets, and conduct business.

The two participants that did not agree that the Internet is changing everything did agree that the Internet is affecting many things. They believe that "people must still be motivated to help themselves to what our country offers. The Internet can facilitate this but cannot alone motivate for positive change."

These warm-up questions were followed by discussion and compiling four lists of technology resources.

Discussion about key firms, those adding value, exporting, and paying higher wages, led to a long list, some which were: API, Sparta Manufacturing, Avondale, Complex Chemical, Holly Manufacturing, Bunge Corp., Farmers Grain, Terra Norris Seed, and Ag Aero.

The list of business partners that contribute to the success of key firms included: banks, the hospital, utilities (Entergy, BellSouth, LA Gas), Rebel Welding, gas companies (Ozark, O'Neal), Bayou Internet, Louisiana Internet, local rental companies, and Western Auto. Macon Ridge Economic Development Region is also serving as a support organization for some area companies in the area of data management and web hosting services.

The discussion quickly became focused on telecom infrastructure issues. Several companies participating in the discussion had different experiences trying to obtain faster Internet connections. Some have ISDN lines, while others interested in those lines had been quoted much higher prices for what seemed

to be similar service. The discussion focused on/ended with a discussion of the need to inventory existing company users in the area, their current needs, and projected needs – in order to establish demand. This information would provide a basis for investigating potential solutions—ways the community can try to solve these Internet access problems.

A second hard infrastructure concern is the Delta Southern rail spur from the Kansas City Southern Railroad line to several companies in the area of the port. At least one of the companies is experiencing serious problems as a result of rail deterioration on that spur, deterioration that could threaten a substantial portion of the company's business. Economic Development Administration (EDA) money to replace the line has been appropriated, but State match money has not yet been made available, holding up work on the line. The company put up a substantial amount of money to make the line usable last year (later partially reimbursed) and may be forced to do the same again soon.

Workforce remains an issue for most companies. Tallulah was the only Louisiana community that expressed a strong perception of partnership between businesses and an educational entity – in this case the Louisiana Technical College – Tallulah. Clearly, LTC-T tries to be responsive to companies' needs; however, companies still find it difficult to find trained/skilled workers who show up for work consistently. Another important soft infrastructure entity in the community is the Community Development Corporation (CDC), which is perceived as important to the community.

Another issue discussed was business financing Some companies are concerned local banks do not understand their businesses and there are few financing options available to them. They report being approached by out of state communities that promise that state-guaranteed financing is available if they will move.

Implementation Opportunities

Participants identified a number of areas for implementation or more detailed planning, including:

- Rail spur renovation from the port to the Kansas City Southern Railroad line. State match is needed immediately to move this project along.
- Area companies need faster, less expensive access to the Internet. There is a need to identify the telecom needs, uses, and desires of area businesses, so aggregate demand can be documented, and a plan for improving service formulated with an available service provider.
- Opportunities for improving business financing should be investigated.

Data Sources: Bureau of Economic Analysis, Bureau of the Census, & the Louisiana Department of Labor

January 2001

Mississippi Technology, Inc.

Clarksdale/Coahoma County, Mississippi

Clarksdale/Coahoma County Profile

Clarksdale, Mississippi is located in Coahoma County, which borders the Mississippi River in a region known as the Lower Mississippi River Delta. Although Coahoma County is steeped in agrarian history and agriculture continues to be important, the county's nonfarming private sector economy is driven by manufacturing, retail trade and services. In 1998 there were an estimated 14,430 full-time and part-time employees in the county, with approximately 10 percent in manufacturing, 15 percent in retail and 35 percent in services. The comparison to Mississippi is shown in the following table:

1998

Employees in	Coahoma	Mississippi

Manuf'ing	10%	17%
Retail Trade	15%	16%
Services	35%	24%

There were approximately 697 businesses in Coahoma County in 1997, with an estimated 26 percent in retail trade, 36 percent in services and 1 percent in manufacturing. Only two establishments employed over 500 people and approximately 602 employed less than 20 people.

In 1998, the population of Coahoma County was estimated at 31,277 with about 39 percent of the population employed full-time or part-time. In 1998, about 54 percent of the county's population were between the ages of 18 and 64. The unemployment estimated average for the county in 1999 was 9.0 percent (5.4 percent in the state). Estimated per capita income for the County was $10,726 in 1988 ($11,695 for the state) and $16,727 in 1998 ($19,776 for the state).

Population decreased approximately 4 percent between 1988 and 1998. In 1997, the population was approximately 34 percent white and 66 percent black. In 1990, Educational attainment in the county, for persons 25 years and over was 54 percent for high school graduates (64 percent for the state) and 15 percent for college graduates (15 percent for the state).

The Mississippi Workshop

Over 30 individuals from Clarksdale, Cleveland, Greenwood and surrounding areas participated in TEAM DelTA's Workshop, held May 23rd in Cleveland, Miss. The workshop offered information about how to create more local wealth and higher-paying jobs and about the emerging technology-based economy. Participants provided TEAM DelTA with a better understanding of regional needs, concerns and the kinds of local technology-based economic development currently underway. Participants also completed questionnaires giving their opinions about the usefulness of specified topics and the amount of technology-based economic development strategic planning already taking place in their communities.

Participants had this to say about Mississippi's Delta region:

Strengths and Opportunities

- Import (e.g. tourism) & Export (e.g., culture food, music, art)
- Good natural resources, location, inexpensive power
- Have local quality innovative companies
- Build clusters - life sciences, metal
- Broad access to community colleges (MDCC, CCC), good high school programs, responsive universities (MVSU, DSU)
- Have people and can increase skilled-labor pool via training investments

Challenges

- Overcome negative perceptions about Miss., the Delta & the ability/capability of Delta people
- Fear or resistance to change (new processes, products, technology)
- Lack of emerging and/or youth leadership, leader development & work ethics & life skills programs
- Workforce development – (need more people with basic skills & technically capable workforce
- Soft Infrastructure – more family entertainment, retail, health care
- Locating & keeping educated/trained people
- Lack of access to capital

Participant Response to Questionnaire

At the state regional level, participant responses to the workshop questionnaire indicate that information about these topics would be most useful:

- Concept of value-added,
- Role of technology & Innovation
- Clusters and networks
- Workforce skills
- Social capital

Participants gave the lowest topic usefulness ratings to:

- Globalization
- Traded sector(s)

Participants indicated they knew of very little over-all action planning. Improving K-12 education was the

only topic perceived as having high amounts of planning throughout the region. However, some planning was identifying for each community (e.g., incubators, networks, training).

The Community Technology Assessment

TEAM DelTA held the community technology assessment meeting for the Clarksdale community on August 16, 2000. The goals of the assessment were to identify the community's general perspectives and priorities on technology-based economic development and gain a better understanding of the key organizations and structure in the community. Fourteen individuals in formal or informal leadership positions in the community, or who offered key information, participated in the facilitated discussion to identify a potential vision for Clarksdale; priorities for technology-based economic development; and, (1) key high value-adding firms (companies), (2) suppliers and support businesses, (3) soft infrastructure entities and (4) elements of physical infrastructure in the Clarksdale area. Gaps in the four layers were also identified.

Participants wrote a brief description of what they wanted Clarksdale to "be good at or known for" – Here's the result:

"to be a safe, friendly community with high values, quality educational and healthcare systems, very low unemployment rates and good recreational facilities that work to offer a good standard of living to residents and support business, high-tech industry, tourism and hospitality services."

Participants were given a hypothetical pot of money for technology-based economic development and asked how they would prioritize economic development spending over the next year in the areas of: recruiting outside industry, helping locally-owned existing businesses, starting new locally-owned businesses, workforce development and education, technology transfer and financial investment. Listed below are participant priorities:

- Workforce & ed. 64% of $
    - Existing businesses 52% of $
    - New businesses 28% of $
    - Recruiting 20% of $
- Technology transfer 20% of $
- Financial investment 16% of $

When asked if the Internet was changing everything, the consensus was that the internet influences the speed of communication and commerce, and enables quicker and more access to resources, products and services. Great concern was expressed about the digital divide: "This technology is not being accessed by the entire population." Another view suggests that while the internet allows individual access to the world, the internet also reduces "emphasis on manual labor" (e.g., affecting the number of low-skill jobs, level of health, types of health concerns, etc.).

To find the existing technology resources and gaps in resources, participants compiled four long lists of (1) Key firms (included were Cooper Tires, Delta Wire, Standard Industries, North West Mississippi Medical Center and Saf-T-Cart); (2) Support organizations or businesses, which contribute to the success of key firms by offering supplies, services or other support (included were Aaron Henry Community Health Center,
North West Mississippi Medical Center, Banks, Clarksdale Utilities,
Coahoma Community College,
BellSouth, Jim Dandy Trucking); (3) Soft infrastructure (included were Mississippi Employment Service Commission, K-12 Schools, Aaron Henry Community Health Center Programs, Coahoma Community College, Chamber of Commerce & Industrial Foundation, Public Library); and, (4) Hard infrastructure (have access to a port, to four-lane U.S. highways, the Helena Arkansas bridge, airstrip, bus line, incubator, some CIT infrastructure). Note: a few critical organizations fell into several lists.

Participants were asked to estimate the perceived involvement (connectivity) among the organizations identified above. Their responses indicate the community resources perceived to be the most interconnected are the economic development entities, community college, utilities and health care providers. This group could provide the core for more detailed planning and implementation to achieve a community technology strategy and for pulling the community together to implement action.

Resource gaps or needed improvements include: cost-effective CIT infrastructure, rail service, a renovated airport, more entertainment facilities & parks; more local support services/products for industry (e.g., parts, construction, industrial trash pick-up, chemical supplier); more flexible daycare and youth

programs; industrial skills training; and, more coordinated relationships between local industry and middle/high schools.

Possible Next Steps

- Form a detailed Community Technology Plan (including CIT infrastructure, industrial needs, aggregating demand strategies);
- Explore/pursue building clusters & networks, technology business incubator, accessing capital;
- Explore potential business or other opportunities to fill resource gaps;
- Form area alliances & work to raise awareness about technology, seize opportunities & reduce gaps.

Sources: Mississippi Development Authority, State Institutions of Higher Learning, U.S. Bureau of the Census, TEAM DelTA data

Cleveland/Bolivar County, Mississippi

Cleveland/Bolivar County Profile

Cleveland, Mississippi is located in Bolivar County, which borders the Mississippi River in a region known as the Lower Mississippi River Delta. Although Bolivar County is steeped in agrarian history and agriculture continues to be important, the county's nonfarming private sector economy is driven by manufacturing, retail trade and services. One of Cleveland's largest employers is Delta State University. In 1998, there were an estimated 17,526 full-time and part-time employees in the county, with approximately 15 percent in manufacturing, 15 percent in retail and 20 percent in services. The comparison to Mississippi is shown in the following table:

1998

Employees in	Bolivar	Mississippi
Manuf'ing	15%	17%
Retail Trade	15%	16%
Services	20%	24%

In 1997, there were approximately 771 businesses in Bolivar County, with an estimated 30 percent in retail trade, 32 percent in services and 3 percent in manufacturing.

In 1998, the population of Bolivar County was estimated at 40,185 with about 44 percent of the population employed full-time or part-time. In 1998, about 56 percent of the county's population were between the ages of 18 and 64. In 1999, the estimated unemployment rate average was 7.4 percent (5.4 percent in the state). Estimated per capita income for Bolivar County was $10,137 in 1988 ($11,695 for the state) and $16,499 in 1998 ($19,776 for the state).

Population has decreased approximately 5 percent between 1988 and 1998. In 1997, the population was estimated to be 36 percent white and 64 percent black. In 1990, educational attainment in Bolivar County, for persons 25 years and over was 55 percent for high school graduates (64 percent for the state) and 15 percent for college graduates (15 percent for the state).

The Mississippi Workshop

Over 30 individuals from Clarksdale, Cleveland, Greenwood and surrounding areas participated in TEAM DelTA's Workshop, held May 23rd in Cleveland, Mississippi. The workshop offered information on how to create more local wealth and higher-paying jobs and about the emerging technology-based economy. Participants provided TEAM DelTA with a better understanding of regional needs, concerns and the kinds of local technology-based economic development currently underway. Participants also completed questionnaires giving their opinions about the usefulness of specified topics and the amount of technology-based economic development strategic planning already taking place in their communities. Participants had this to say about Mississippi's Delta region:

Strengths and Opportunities

- Import (e.g. tourism) & Export (e.g., culture food, music, art)
- Good natural resources, location, inexpensive power
- Have local quality innovative companies

- Build clusters - life sciences, metal
- Access to community colleges (MDCC, CCC), some good high school programs, responsive universities (MVSU, DSU),
- Have people & can increase skilled-labor pool via training investments.

Challenges

- Overcome negative perceptions about Miss., the Delta & the ability/capability of Delta people
- Fear/resistance to change (new processes, products, technology)
- Lack of emerging and/or youth leadership, leader development & work ethics & life skills programs
- Workforce development – (need more people with basic skills & technically capable workforce)
- Soft Infrastructure – more family entertainment, retail, health care
- Locating & keeping educated/trained people
- Lack of access to capital

Participant Response to Questionnaire

At the state regional level, participant responses to the questionnaire indicate that information about these topics would be most useful:

- Concept of value-added,
- Role of technology & innovation
- Clusters and networks
- Workforce skills
- Social capital

Participants gave the lowest topic usefulness ratings to:

- Globalization, Traded sector(s)

Participants indicated they knew of very little over-all action planning. Improving K-12 education was the only topic perceived as having high amounts of planning throughout the region. However, some planning was identifying for each community (e.g., incubators, networks, training).

The Community Technology Assessment

TEAM DelTA held the community technology assessment meeting for the Cleveland community on August 7, 2000. The goals of the assessment were to identify the community's general perspectives and priorities on technology-based economic development and gain a better understanding of the key organizations and structure in the area. Fourteen individuals in formal or informal leadership positions in the community, or who offered key information, participated in the facilitated discussion to identify a potential vision for Cleveland; priorities for technology-based economic development; and, (1) high value-adding companies, (2) suppliers and support businesses, (3) soft infrastructure entities and (4) elements of physical infrastructure in the Cleveland area. Gaps in the four layers were also identified.

Participants wrote a brief description of what they wanted Cleveland to "be good at or known for" – Here's the result:
"to be a growing community with a quality environment for families, good race relations, adequate housing, economic stability for residents, and a proven ability to merge available resources to support industry, manufacturing, technology businesses, hospitality services, educational and research opportunities, and technology application."

Participants were given a hypothetical pot of money for technology-based economic development and asked how they would prioritize economic development spending over the next year in the areas of: recruiting outside industry, helping locally-owned existing businesses, starting new locally-owned businesses, workforce development and education, technology transfer and financial investment. Listed below are participant priorities:

- Workforce & ed. 46% of $

- Existing businesses 38% of $
- Recruiting 35% of $
- Technology transfer 32% of $
- New businesses 27% of $
- Financial investment 22% of $

When asked if the Internet is changing everything, the consensus was internet influences the "way people communicate and conduct business;" increases global competition, marketing and product access; forces businesses to analyze production, markets, and distribution; and allows greater ability to locate information and participate in educational opportunities. There was concern about the digital divide, "People who don't use it may not know their world is changing…There is probably a significant number without access or ability…While technology can change the amount of knowledge within a community, very little change can take place without financial resources."

To find the existing technology resources and gaps in resources, participants compiled four long lists of (1) Key firms (included were Baxter Health Care, Delta and Pine Land, Bolivar Medical Center, Royal Vendors, Delta State University); (2) Support organizations or businesses, which contribute to the success of key firms by offering supplies, services or other support (included were Bolivar Medical Center, BellSouth, Mississippi Valley Gas, Entergy, Gaines Petroleum, Mississippi Employment Security Commission); (3) soft infrastructure (included were Mississippi Delta Community College, Delta State University Small Business Development Center, Chamber Team Cleveland, K-12 education; and, (4) hard infrastructure (access to County Port, short line rail service, access to four-lane U.S. highways, about an hour's drive from an U.S. Interstate, has a small airstrip, some CIT fiber lines, a state park). Note: a few critical organizations fell into several lists.

Participants were asked to estimate the perceived involvement (connectivity) among the organizations identified above. Their responses indicate the community resources perceived to be the most interconnected are the educational entities, Bolivar County Chamber of Commerce Team Cleveland, telephone & utilities, health care providers and MESC. This group could provide the core for more detailed planning and implementation to achieve a community technology strategy and for pulling the community together to implement action.

Resource gaps or needed improvements include: an adequate east/west route, a high-speed cost-effective CIT infrastructure; flexible day care facilities; youth programs & facilities; family entertainment, recreation facilities & cultural events; comprehensive approach to workforce development, more program coordination, a state-of-the-art facility; housing & retail; temp. staff service.

Possible Next Steps

- Form a detailed Community Technology Plan (including CIT infrastructure, aggregate demand strategies, training needs/facility);
- Explore/pursue building clusters & networks, accessing capital;
- Explore potential business or other opportunities to fill resource gaps;
- Form area alliances and work to inform and raise awareness about technology, seize identified opportunities & reduce gaps.

Sources: Mississippi Development Authority, State Institutions of Higher Learning, U.S. Bureau of the Census, TEAM DelTA data

Greenwood/Leflore County, Mississippi

Greenwood/Leflore County Profile

Greenwood, Mississippi is located in Leflore County, in a part of the region known as the Lower Mississippi River Delta. Although Leflore County is steeped in agrarian history and agriculture continues to be important, the county's nonfarming private sector economy is driven by manufacturing, retail trade and services. In 1998 there were an estimated 21,081 full-time and part-time employees in the county, with approximately 21 percent in manufacturing, 15 percent in retail and 20 percent in services. The comparison to Mississippi is shown in the following table:

1998

Employees in	Leflore	Mississippi
Manuf'ing	21%	17%
Retail Trade	15%	16%
Services	20%	24%

There were approximately 887 businesses in Leflore County in 1997, with an estimated 28 percent in retail trade, 35 percent in services and 1 percent in manufacturing. Most businesses employed less than 20 people.

In 1998, the population of Leflore County was estimated at 37,241 with about 57 percent of the population employed full-time or part-time. In 1998, about 56 percent of the county's population were between the ages of 18 and 64. In 1999, the unemployment rate estimated average was 8.4 percent (5.4 percent in the state). Estimated per capita income for Leflore County was $11,463 in 1988 ($11,695 for the state) and $17,915 in 1998 ($19,776 for the state).

Population decreased approximately 3 percent between 1988 and 1998. In 1996, the population was 37 percent white and 62 percent black. In 1990, educational attainment in Leflore County for persons 25 years and over was 55 percent for high school graduates (compared to 64 percent for the state) and 16 percent for college graduates (compared to 15 percent for the state).

The Mississippi Workshop

Over 30 individuals from Clarksdale, Cleveland, Greenwood and surrounding areas participated in TEAM DelTA's Workshop, held May 23rd in Cleveland, Miss. The workshop offered information about how to create more local wealth and higher-paying jobs and about the emerging technology-based economy. Participants provided TEAM DelTA with a better understanding of regional needs, concerns and the kinds of local technology-based economic development currently underway. Participants also completed questionnaires giving their opinions about the usefulness of specified topics and the amount of technology-based economic development strategic planning already taking place in their communities.

Participants had this to say about Mississippi's Delta region:

Strengths and Opportunities

- Import (e.g. tourism) & Export (e.g., culture food, music, art)
- Good natural resources, location, inexpensive power

- Have local quality innovative companies
- Build clusters - life sciences, metal
- Broad access to community colleges (MDCC, CCC), good high school programs, responsive universities (MVSU, DSU)
- Have people and can increase skilled-labor pool via training investments

Challenges

- Overcome negative perceptions about Miss., the Delta & the ability/capability of Delta people
- Fear or resistance to change (new processes, products, technology)
- Lack of emerging and/or youth leadership; leader development, work ethics & life skills programs
- Workforce development – (need more people with basic skills & technically capable workforce
- Soft Infrastructure – more family entertainment, retail, health care
- Locating & keeping educated/trained people
- Lack of access to capital

Participant Response to Questionnaire

At the state regional level, participant responses to the workshop questionnaire indicate that information about these topics would be most useful:

- Concept of value-added,
- Role of technology & innovation
- Clusters and networks
- Workforce skills
- Social capital

Participants gave the lowest topic usefulness ratings to:

- Globalization, Traded sector(s)

Participants indicated they knew of very little over-all action planning. Improving K-12 education was the only topic perceived as having high amounts of planning throughout the region. However, some planning was identifying for each community (e.g., incubators, networks, training).

The Community Technology Assessment

TEAM DelTA held the community technology assessment meeting for the Greenwood community on July 12, 2000. The goals of the assessment were to identify the community's general perspectives and priorities on technology-based economic development and gain a better understanding of the key organizations and structure in the area. Fourteen individuals in formal or informal leadership positions in the community, or who offered key information, participated in the facilitated discussion to identify a potential vision for Greenwood; priorities for technology-based economic development; and, (1) high value-adding companies, (2) suppliers and support businesses, (3) soft infrastructure entities and (4) elements of physical infrastructure in the Greenwood area. Gaps in the four layers were also identified.

Participants wrote a brief description of what they wanted Greenwood to "be good at or known for" – Here's the result:
"to be known as a sustainable community with racial harmony, hospitality, educated marketable and talented people, economic stability for all; and that promotes and retains industry, uses current technology, attracts tourism, strengthens agri-businesses, is an established distribution crossroads and a retail destination."

Participants were given a hypothetical pot of money for technology-based economic development and asked how they would prioritize economic development spending over the next year in the areas of: recruiting outside industry, helping locally-owned existing businesses, starting new locally-owned businesses, workforce development and education, technology transfer and financial investment. Listed below are participant priorities:

- Existing business 45% of $

- Workforce & ed. 38% of $
- Technology transfer 36% of $
- New businesses 30% of $
- Financial invest 26% of $
- Recruiting 25% of $

When asked if the Internet is changing everything, the consensus was the internet brings resources, choices and information to isolated places; provides the method for limitless learning; offers financial avenues, breaks the curve for supply and demand. Concern was expressed about the digital divide – bridging educational, career and societal gaps between the computer-literate "haves and have nots." People should "not forget how to do a task by hand and meet with others." One participant wrote, "The basic principles of life will never change: God, family, values of character. The internet does not change our basic needs, just how we acquire them."

To find the existing technology resources and gaps in resources, participants compiled four long lists of (1) Key firms (included were Viking Corporation, John Richard Company, Irving Automotive, Greenwood Leflore Hospital,); Staplcotn); (2) Support organizations or businesses, which contribute to the success of key firms by offering supplies, services or other support (included were Greenwood Utilities, Mississippi Valley State University, Bellsouth, K-12 ed. local banks); (3) Soft infrastructure (included were restaurants, hunting/fishing clubs, economic development organizations, sports events/organizations, volunteer organizations); and, (4) Hard infrastructure (access to E/W 4-lane hwy, 30-minutes from U.S. Interstate, a rail line, some CIT infrastructure, seasonal water transport, an airport that could accommodate small jet commercial service, state park). Note: a few critical organizations fell in several lists.

Participants were asked to estimate the perceived involvement (connectivity) among the organizations identified above. Their responses indicate the community resources perceived to be the most interconnected are the educational entities, E/D organizations, telephone & utilities, hospital, Viking Range, banks, sports & volunteer organizations. This group could provide the core for more detailed planning and implementation to achieve a community technology strategy and for pulling the community together to implement action.

Resource gaps or needed improvements include: port access, four-lane N/S route & N/E link, high-speed cost-effective communication access, retail (grocery, clothes), recreational & entertainment facilities/events, flexible day care, housing, public transportation.

Possible Next Steps

- Form a detailed Community Technology Plan (including CIT infrastructure, training needs, aggregating demand strategies);
- Explore/pursue building clusters & networks, technology business incubator, accessing capital;
- Explore potential business or other opportunities to fill resource gaps;
- Form area alliances & work to raise awareness about technology, entrepreneurship & support, seize identified opportunities & reduce resource gaps.

Sources: Mississippi Development Authority, State Institutions of Higher Learning, U.S. Bureau of the Census, TEAM DelTA data

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5. Company Case Studies

The TEAM Delta project proposed to identify small, high-tech businesses during the Community Technology Assessments in the nine Delta communities. Specific attention was focused on some of these firms.

TEAM Delta partner Enterprise Corporation of the Delta conducted Company Case Studies to assess technology needs and applications of these exemplary businesses.

TEAM DelTA Case Studies

January 2001 TEAM DelTA

Case Study Profile

In each of the local Community Technology Assessment meetings, participants were asked to identify companies that were:

- Based locally in the Delta,
- Contributed significantly to the local economy and had the potential for future growth,
- Made significant use of technology in daily operations,
- Conducted sales inside and outside of the Delta region.

From the list of companies that each community generated, participants were asked to identify one or two companies to participate in the TEAM DelTA Case Study.

The purpose of the Case Study was to generate a more detailed understanding of the opportunities and challenges faced by technologically dependent Delta-based companies. The Case Study also provided an opportunity to highlight the successes of these companies.

A total of nine companies were interviewed from across the region. Each company answered a broad range of questions focusing on products and services, production processes utilized, technology utilized, workforce development, and local infrastructure. In many instances the case studies affirmed the findings associated with the TEAM DelTA Community Assessments.

Significant Success, Significant Opportunity

The companies interviewed exhibited significant success and enormous innovation in a number of areas involving technology.

Viking Range based in Greenwood, MS utilizes technology in significant ways for product development, marketing, and in the establishment of an internal distribution network.

MicroSped also based in Greenwood, MS capitalized on available technologies to create products and services that benefit special education providers and catfish farmers. The company relies heavily on its technological infrastructure and the connectivity of schools to provide product upgrades.

DeltaPhones based in Delhi, LA utilizes technology to streamline operations in providing pre-paid phone service. This includes a direct connection to incumbent local carrier through a T–1 and the ability to coordinate transactions and set up new accounts electronically with a local bank in Monroe.

Delta and Pine Land based in Scott, MS utilizes conducts high tech research to develop new products and relies heavily on technology and connectivity in production processes and interactions with buyer/supplier networks.

Hoffinger, Inc., a producer of above ground swimming pools in Helena, AR relies on high level connectivity to interact with its network of dealers and suppliers.

EdatCat in Cleveland, MS develops software solutions that enable businesses around the globe to conduct transactions on the internet.

Sparta Manufacturing based in Tallulah, LA has established a web presence for its custom made trailers that has helped generate business opportunities domestically and abroad.

Computers Inc. a computer reseller based in Clarksdale, MS utilizes the internet to bid on contracts and follow-up with customers.

Outcomes and Opportunities

Each of the companies studied exhibited a unique ability to respond to their local environment and to create opportunities to develop and expand their business. This occurred through a variety of mechanisms that included:

- Development of products that responded to needs in the local market and that had the potential to appeal to a broader market,
- Investments in process improvements and production
- technologies,
- Creation of job opportunities that provided an above-average standard of living for the local area, and
- Ability to capitalize on opportunities presented by the new economy

Challenges

Prohibitive costs associated with enhanced connectivity, particularly for smaller companies Difficulty attracting and retaining high-end employees (managerial, professional, and technical skilled) Infrastructure concerns specific to each community (reliable energy, improved roads, and rail) Lack of a regional and in some cases local strategy for economic development Lack of access to capital Disconnect between employment opportunities and
training that salaried employees receive

Possible Next Steps

- Pooling resources/aggregating demand for improved connectivity
- Actively engaging in private and public efforts to improve local and regional infrastructure and to promote regional economic development strategies
- More direct interaction with workforce development entities and, improved opportunities for mentoring or job shadowing

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6. Accessing Technology Conference

The Accessing Technology Conference was held in Vicksburg, Mississippi on January 25 and 26, 2001. The conference title was Regional Empowerment, Economic Growth: Accessing Technology in the Delta Region.

TEAM Delta partner ASME International played the lead role. Major financial and in-kind support was also provided by the:

- Arkansas Science & Technology Authority,
- Enterprise Corporation of the Delta,
- Entergy Corporation (in Arkansas, Louisiana, and Mississippi),
- Louisiana Partnership for Technology and Innovation,
- Community Technology Solutions, a division of Mississippi's Institute for Technology Development,
- Regional Technology Strategies,
- Southern Growth Policies Board and the Southern Technology Council,
- U.S. Department of Commerce,
- BellSouth,

- Southwestern Bell, and
- The Winthrop Rockefeller Foundation.

In addition, the following organizations contributed in-kind support: the Louisiana Department of Economic Development, Louisiana Technical College at Tallulah and West Monroe, Mississippi Development Authority, Digital Louisiana, EAST Project, Explornet, and Foundation for the Mid South.

The agenda for the Accessing Technology Conference, Regional Empowerment, Economic Growth: Accessing Technology in the Delta Region, follows.

TEAM DeltA

A technology based Economic Development Alliance in the Mississippi River Delta

REGIONAL EMPOWERMENT, ECONOMIC GROWTH:
Accessing Technology in the Delta Region

January 25-26, 2001
Vicksburg Convention Center ■ Vicksburg, MS

Program Agenda

Thursday, January 25

3:30 PM — **Registration Open**

4:00 – 5:00 PM — **Opening Remarks & Keynote Address**
Jim Clinton, Executive Director
Southern Growth Policies Board

Anita Balchandra, EPSCoT Director
U.S. Department of Commerce

5:00 – 5:30 PM — **Turning Communities Toward Technology**
Dr. John Ahlen, President
Arkansas Science & Technology Authority

5:30 – 7:00 PM — **Reception in exhibit area** (cash bar)

Friday, January 26

7:00 – 8:00 AM — **Registration Open/Continental Breakfast**

8:00 – 8:15 AM — **Welcome & Introduction to Program**
Dr. Angeline Gocwin Dvorak, President & CEO
Mississipp Technology, Inc./Institute of Technology Development, Inc.

Monica Morman-Saunders, Chair, Board on Minorities & Women
ASME International

8:15 – 9:30 AM — **Best Practices: Workforce Readiness**

Moderator: Lynn McGee, Program Manager, Foundation for the Mid South

Panelists: Tim Stephenson, Founder & Director, EAST Program
Scott Cox, Industrial Coordinator, Louisiana Technical College
David Bolick, CEO, ExplorNet

9:30 – 9:45 AM — **Break**

TEAM DeltA and the Answering Technology in the Delta Region Symposia is a cooperative alliance with the Arkansas Science & Technology Authority, Mississippi Technology, Inc., Louisiana Partnership for Technology and Innovation, ASME International, Southern Technology Council, Regional Technology Strategies, Enterprise Corporation of the Delta, Entergy Corporation, and the U.S. Department of Commerce/EPSCoT.

9:45 – 11:00 AM — **Best Practices: Bridging the "Digital Divide"**

Moderator: Monieca West, Director, Economic Development, Southwestern Bell

Panelists: Mike Stagg, Founder & Director, Digital Louisiana
Harris Johnson, P.E., Manager of Information Technology Outreach, Georgia Tech Economic Development Institute

11:00 AM – 12:30 PM — **Implementation Assets: Accessing State-Federal Resources**

Moderator: Alan Branson, Vice President, Business Development, Enterprise Corporation of the Delta

Panel: John Edwards, State Director, USDA Rural Development
Jerry Foster, Regional Counsel, Economic Development Administration

12:30 – 2:00 PM — **Lunch Program**

The TEAM DELTA Project: Products, Processes, and Future Visions

Moderator: Dr. John Ahlen, Arkansas Science & Technology Authority

Panel: Sylvia Goldman, Project Director, Institute for Technology Development, Inc.
Ann Gulsinger, Vice President, Louisiana Partnership for Technology & Innovation
Garrett Martin, Senior Program Officer, Enterprise Corporation of the Delta

2:00 – 2:15 PM — **Break**

2:15 – 3:00 PM — **Community Technology Strategy: Making It Happen**

Moderator: Trent Williams, Principal, Regional Technology Strategies

Panelists: Stanley Goldsmith, Program Manager, Virginia's Region 2000
Dr. Louis Tornatzky, Fellow, Southern Technology Council

3:30 – 4:30 PM — **Bringing It All Back Home**
Dr. Angeline Godwin Dvorak, Mississippi Technology, Inc./Institute for Technology Development, Inc.

4:30 PM — **Adjourn**

TEAM DeltA and the Accessing Technology in the Delta Region Symposia is a cooperative alliance with the Arkansas Science & Technology Authority, Mississippi Technology, Inc., Louisiana Partnership for Technology and Innovation, ASME International, Southern Technology Council, Regional Technology Strategies, Enterprise Corporation of the Delta, Entergy Corporation, and the U.S. Department of Commerce/EPSCoT.

7. Learning Modules

The content for the web-based training modules is derived from all other aspects of the TEAM Delta project, including the Technology-based Economic Development

Workshops, the Community Technology Assessments, and the Delta Region Accessing Technology Conference. Therefore, the modules provide easy and nearly complete access to the information and processes developed during the project to support technology-based economic development for communities.

TEAM Delta partner Regional Technology Strategies played the lead role in packaging the modules.

The TEAM Delta project posted the completed modules on the TEAM Delta website <http://www.teamdelta.org/>. The modules are also presented in the Appendix.

Appendix: Asynchronous Learning Modules

Module 1. Introduction to Team Delta's Online Learning Modules

SLIDE 1-1

Introduction

The purpose of the these 10 modules is to give community leaders in the Mississippi Delta information about new ways of thinking about economic development, tools for assessing your region's technology assets, and ideas on how to take the next steps toward increasing economic prosperity in your region.

These modules were created by a partnership of the Institute of Technology Development in Mississippi, the Arkansas Science & Technology Authority, and the Louisiana Partnership for Technology and Innovation. Their work was supported by Regional Technology Strategies and the Southern Growth Policies Board.

The heart of these modules and of Team Delta is walking you through a process we have created called a Community Technology Assessment (CTA). The goal of the CTA is to assemble, share, and analyze data about the community. The process of convening community and business leaders to assess technology-related resources and relationships among businesses, schools, government, and others can give you a new perspective on your community and how to position it for the New Economy. It is likely you have more than you realize and a real foundation upon which to build economic growth.

This CTA process has already taken place in nine Delta communities. These modules give other communities interested in the process access to the same presentations and resources used in those communities. While it's likely that you would still benefit from outside assistance in organizing a CTA, the essential information and step-by-step guide for doing so is presented here in these modules.

This introductory module briefly outlines the objectives of each of the remaining nine modules.

SLIDE 1-2

Foundations for New Economic Development

Module 2: Brief Economic History of the U.S. Module 2 describes broadly the major economic changes that have taken place in the American economy, and to develop an understanding of the consequences of these changes as they continue to take place in the U.S. South.

Module 3: Seeing the Future. In Module 3, the purpose is to help you understand changes that are taking place as we strive to take part in the "New Economy" and tensions that often occur in the transition. It also suggests actions that your region can begin to take to build the future to which we all aspire.

Module 4: Building Competitive Advantage. The purpose of this module is to describe what it means to build community competitive advantage in your region. Building community competitive advantage is about creating higher wage jobs and more profits for Delta businesses. It's about building more local wealth, a large portion of which is reinvested back into the community. It's also about developing your economy to the point where more local citizens own or have some control over the resources that produce wealth.

SLIDE 1-3

Economic Analysis and Undertaking a Community Technology Assessment

Module 5: Understanding Your Economy. A critical step in assessing your economy is to understand its strengths and weaknesses, and what makes your regional economy unique. The data analyses provided in this module should be conducted by local or state economic development staff or outside consultants prior to your Community Technology Assessment. The resulting statistics will be useful starting points to help participants think about the regional economic "big picture" and your relationship to the national economy.

Module 6: Laying the Groundwork for a Community Technology Assessment. The preceding modules focused on the changes in our national and international economy and what those changes mean for the Delta. It's increasingly clear that economic development is different today than it was just five years ago. The old model that relies on traditional "hard" infrastructure and recruiting branch plants into a region is no longer sufficient for competition in the new economy. Delta communities need to understand better their own resources and the types of investments and activities they can undertake that will reap the greatest long-term benefits for their local economies.

This module sets the stage for how a community can conduct its own Community Technology Assessment (CTA) in order to equip itself with the necessary knowledge to pursue modern economic development activities that will support internal growth and development and will attract support from outside the community.

Module 7: Conducting a Community Technology Assessment. The objective of this module is to give CTA leaders an understanding of the activities that should take place immediately prior to and during a Community Technology Assessment (CTA) meeting. Before this meeting, you should have already conducted economic analysis (see Module 5) to help better understand the economic drivers in your region and you should have already established a CTA team to lead the process (see Module 6).

SLIDE 1-4

Next Steps after a CTA

Module 8: Technology-Based Planning. This module and the following two will give you ideas on how you can take the results of your CTA and implement and assess them in ways that will help increase your region's competitive advantage and levels of value-added commerce.

A strategic plan can be useful to direct your implementation efforts. The purpose of this module is to outline how to use the CTA as the foundation for a community technology strategic plan.

Module 9: Building Leadership Resources.

Module 10: Measuring Community Progress. A final but critical step in the process of planning for technology-based development is evaluating the extent to which the goals and objectives set forth in your strategic plan have been met. The evaluation process is a means by which to monitor progress toward both short- and long-term goals as well as assessing the performance of your community relative to comparable communities within and outside the region. The objective of this module is to introduce you to a framework for measuring your community progress.

SLIDE 1-5

Summary

We hope that you find the content in these materials useful as you think about your community and its economic development strategy for the future.

Please contact the members of Team Delta should you like assistance as you consider implementing a CTA in your region.

Module 2. A Brief Economic History of the United States

SLIDE 2-1

Module Objective

The purpose of this module is to describe broadly the major economic changes that have taken place in the American economy, and to develop an understanding of the consequences of these changes as they continue to take place in the U.S. South.

SLIDE 2-2

Farmer, Mechanic, Clerk. . .

In his 1982 book *Megatrends: Ten New Directions Transforming Our Lives*, author John Naisbitt described the history of the United States in the simple terms of dominant workforces during the agrarian, industrial, and service economies. Thus, simplifying things, Naisbitt said that by 1980 we had gone from a nation of farmers, to a nation of mechanics, to a nation of clerks.

In the wake of Megatrends, new developments have accelerated the transformations in our lives and economy. Consider that, "By the year 2006 we predict almost half the workers in the United States will work for industries that either produce information technology or use it intensively." This is according to Robert Mallett, then-Deputy Secretary of the U.S. Department of Commerce.

This projection suggests that we are on the threshold of the economic era beyond that of Naisbitt's clerk. The emerging dominant workforce is the knowledge worker, the employee whose value to the employer is not embodied in skill, that is what the worker can do, but in what the worker knows, thinks, and communicates.

SLIDE 2-3

. . . Knowledge Worker

As American workers shift to employment in firms that produce and intensely use information technology, workers will need to have their skills upgraded and new entrants to the workforce will need higher-level skills than their predecessors. Arkansas Governor Mike Huckabee said, "We must upgrade the skills of the state's existing workforce, and we must improve markedly the education we provide the current generation of students. We simply cannot allow our state's children to graduate from schools that aren't good enough,

with educations that aren't good enough, going into jobs that simply won't be good enough."

SLIDE 2-4

How Have these Economic Transitions Transpired in the South?

The progression of economies in the South seems to follow Naisbitt's three stages followed by a fourth: farmer, mechanic, clerk, knowledge worker.

In the first stage, the agricultural economy of the early 20th century dominated the South's economy. The critical resources were (1) the land itself and the (2) the labor needed to work it. Mechanization of agriculture displaced agricultural labor, and many of the displaced workers migrated to the industrial workplace because their skills were easily transferable.

In the second stage, beginning in the late 1950s, strong efforts were made to expand the industrial economy in the rural South. These efforts recognized the importance of the two critical resources – labor remained one and capital replaced land as the second – emphasized industrial recruiting, appropriately, offered financial incentives for buildings, land, and equipment, and featured the South's work ethic and relatively low wages. Per-capita income in the South, as a percentage of the U.S. as a whole, grew as wages increased from agricultural to industrial levels.

SLIDE 2-5

The Transition to Clerk

The third stage is a transitional phase. In this stage, technology discretely exerted an influence on the industrial economy, probably beginning in the aftermath of World War II research and development projects. This phase was marked in the early to mid-1980s by efforts of many Southern (as well as other) states to emulate the economic success of places like North Carolina's Research Triangle Park, Boston's Route 128, and California's Silicon Valley. It was also marked, however, with debates about how real the impact of technology was on the industrial economy and how technology influenced the skill levels of the industrial workforce.

During this third phase, the message to the work force was somewhat ambiguous and reflected two philosophies. One message emphasized the labor needs of the traditional industrial workplace where a good work ethic and traditional skills were adequate. The other post-Sputnik message (Sputnik was the first satellite launched by the Soviet Union in 1957 which began the "space race") advocated the higher-skill levels, requiring more science and engineering education and technical training, necessary to develop, deploy, and operate the advanced technology being used in high-tech firms.

SLIDE 2-6

Skills Matter

In the later years of this third stage, it became abundantly clear that those who advocated higher-skill levels were correct in recognizing that the critical resources for economic well being had changed. Economists began to understand that the previously unexplained gains in productivity could be accounted for only by the deployment of advanced technology. By 1987, when Robert Solow won the Nobel Prize for economics (for explaining productivity gains in 1957), the critical resources for economic well being included capital and *skilled* labor, which became essential due to the addition of technology as the third critical resource.

The places in the South where efforts to embrace the technology-based economy have been most effective

show that increased investments in education and the research and development infrastructure of higher education result in continued growth in state per capita income relative to per capita income nationally. These kinds of efforts are generally at a relatively large scale and uniformly sustained for the long-term. Those places where efforts to embrace the technology-based economy were too small, too short term, or not made at all, have not seen growth in per capita income above industrial levels. Indeed the trends in these places show loss of traditional, lower-skilled jobs while being unable to meet growing demands skilled and better-educated workers.

SLIDE 2-7

Creating Knowledge Workers

The last – fourth – stage, from the mid-1990s onward, coincides with the influence of information technology on the economy. In a relatively short period, information technology has become pervasive. Bill Myers, president of the United States Internet Council says that the Internet changes everything, and adds that he is underestimating its significance. Don Tapscott, author of *The Digital Economy* and *Growing Up Digital*, said in 1999 that we are approaching "a unique period in human history where for the first time, children are an authority on something that is really important. . . . [They] are an authority on the big revolution that is changing every institution in society."

This stage is marked by widespread acceptance that we are moving into a new, information-age economy where technology and a well-educated workforce are essential for successful global competition. This has not been missed by Federal Reserve Chairman Alan Greenspan who has said that government has no greater challenge than making sure it properly educates students to keep pace with a rapidly changing economy. He specifically suggested that states, local school systems, labor unions and business groups should work together to develop appropriate standards for teaching information technology skills in the classroom. "If we are to remain pre-eminent in transforming knowledge into economic value, the U.S. system of higher education must remain the world's leader in generating scientific and technological breakthroughs and in preparing workers to meet the evolving demands for skilled labor," Greenspan told governors at a meeting of the National Governors Association. "The heyday when a high school or college education would serve a graduate for a lifetime is gone."

SLIDE 2-8

Economic Evolution—the "New" Economy

So as we begin the 21st century, the critical resources for economic well being continue to shift. One limiting factor in the "New" Economy is innovation, just as land is the limiting factor in agriculture and capital is the limiting factor in industrial development. The second limiting factor is human capital, which is labor transformed and augmented by education and training.

The New Economy is described in greater detail in Module 3. For now, it is merely important to note we are not really engaged in a contest between the "old" economy and the "new" economy. Instead, we are caught up in an evolutionary economic process where new developments offer opportunities to change. The industrial economy did not replace the agricultural economy, rather mechanization transformed agriculture, which remains an essential, highly efficient, but smaller part of the overall economy. The high–tech economy did not replace the industrial economy, rather technology transformed industry (and also further transformed agriculture), which remains an essential, more efficient, and shrinking part of the overall economy.

SLIDE 2-9

The Importance of Innovation and Human Capital

The contemporary economic process is driven by innovation and the rapid adoption of innovations, both of which are facilitated by well-educated and highly trained workers. This is why innovation and human capital are seen as the limiting factors in the New Economy, and it is why the production of these resources is so important.

During the agricultural- and industrial-focused economies, innovation largely went unnoticed because capital and labor (largely equipped with agricultural and industrial skills) were the essential components for economic well being. After World War II and the beginning of the space race, the role of technology in the economy began to emerge and was especially evident in productivity enhancements. Today, information technology is generally accepted as the precursor to the New Economy and analysts are beginning to focus on innovations and well-educated workers as more meaningful factors in modern economic well being. Indices developed to measure the capacity of state and regional economies include such things as proximity to research universities, expenditures for research and development, entrepreneurial activity, and access to risk capital. The conclusion is that higher education's infrastructure (augmented by entrepreneurship and availability of risk capital) is more important than ever.

SLIDE 2-10

Regional Competitive Advantage and Entrepreneurship

There is a contest between regions that adopt new developments as a competitive advantage over those with whom they compete. Farmers and manufacturers who adopt information-age technologies, for example, to serve distant, even global, markets, have an advantage over those who are limited to local markets. This phenomenon is described in greater detail in Module 4.

Another aspect of competitive advantage is found in the products that were not previously possible, but which become possible because of new scientific discoveries that lead to new technologies that enable new products.

SLIDE 2-11

Innovation Leads to Economic Growth and New Market Development

One particularly interesting example of technology-based innovation and new market development is the airplane. Heavier than air flying machines had been envisioned before Orville Wright made his 12 second flight on September 17, 1903. Not only had such flying machines been imagined, but experts at the time had "proved" that flight by machines was not feasible. Wright's flight had already taken place, but it was not to be reported until January 1905. Shortly after the flight, but before its report, Professor Simon Newcomb, a respected scientist of his day, stated his position in a weekly publication:

> Quite likely, the twentieth century is destined to see the natural forces which will enable us to fly from continent to continent with a speed far exceeding that of the bird.
>
> But when we inquire whether aerial flight is possible in the present state of our knowledge; whether, with such materials as we possess, a combination of steel, cloth and wire can be made which, moved by the power of electricity or steam, shall form a successful flying machine, the outlook may be altogether different.

He went on to say:

If, therefore, we are ever to have aerial navigation with our present knowledge on natural capabilities, it is to the airship floating on air, rather than the flying machine resting on air, to which we are to look.

SLIDE 2-12

What Does this Tell Us?

The lesson to be drawn from the development of the airplane is that new technology, in the form of the internal combustion engine, provided a power source that was light enough to be used to power a heavier than air flying machine and made possible that which had previously been thought to be impossible. The more general lesson is that sometimes the adoption of a technological advancement doesn't just incrementally improve an existing product and make it more competitive in the marketplace. Sometimes, entrepreneurs, in their efforts to create new products and new businesses, create new markets as well.

SLIDE 2-13:

What's Next?

In this module we described in broad terms how the U.S., and more specifically the Southern, economy has evolved. We also began a discussion of where our economy is headed next and what it takes to be successful given new economic structures. The next module builds on this by going into more specifics about what the "new" economy—a phrase often used but rarely defined—really means to residents of the Mississppi Delta and how regions can take actions that will build a stronger, more prosperous future.

Module 3. Seeing the Future

SLIDE 3-1

Module Objective

"In the South, the past is not dead and gone, it's not even past."
--Faulkner

Perhaps this module should be called Seizing the Future…carpe futurum…because that is what Delta communities must do to ensure their economic viability for future generations. Can we move beyond Faulkner's assertion?

The purpose of this module is to help you understand:

- Changes that are taking place as we strive to take part in the "New Economy."
- Tensions that often occur in the transition
- Actions that your region can take to build the future to which we aspire

SLIDE 3-2

Living in the Future

There's been a sense that in many ways we are already living in the future.

Danny Hillis, who invented massively parallel computing, has written that as a child the future was always designated by the year 2000. In the 1980s, it was still the same. Even so in 1999. "I've been watching the future disappear a year at a time throughout my life," Hillis wrote.

Peter Drucker writes about the pace of innovation in the 20th century increasing exponentially, cutting across business, technology, culture and politics. It is quantitatively and qualitatively different than any other period in human history.

For much of the century this fact gave us the heady feeling that we could accomplish anything: cure disease, end poverty, split the atom, live forever and put a man on the moon by the end of the decade.

However by the end of that decade (1960s), the accumulated momentum, the cultural shifts, the unforeseen consequences of progress, the woeful complexity of it all conspired to undermine our confidence and drop us into the disorienting world of future shock. Now, thirty years later we have reinvented ourselves several times over, put the moon on hold, blown the top off of the Dow Jones Industrial Average, outlived the communist myth, and we find ourselves staring down the new millennium with a world full of computers designed for the wrong century.

In John Prine's words, we are living in the future. Yet what exactly is the future, and how do we plan for it?

SLIDE 3-3

Seeing the Future

Formed by Southern governors in 1971 to foster and explore economic development in the South, the Southern Growth Policies Board (SGPB) initiated Seeing the Future as a project to help state and local leaders understand how technology drives economic development and what policies would work to allow southern states and regions participate more fully in the knowledge-based economy.

In 1998-9**,** we organized eighteen focus groups to discuss technology, trade, manufacturing, workforce development, infrastructure, entrepreneurship, capital, and governance. More than 250 leaders from business, government and education communities took part in "storyboarding" sessions. Leaders from all sectors reinforced the need for well-grounded, clear insights into each of the domain areas and particularly how they fit together in the emerging New Economy. They told us they often feel isolated within their own field of expertise—there is a compelling need for disparate sectors to come together and understand each other.

Based on these activities, the SGPB adopted the mission of advocating the kinds of visionary, entrepreneurial behavior that will be necessary in all sectors of Southern society for us to build the future of our dreams.

The SGPB encourages you to tap all of these resources as your community seeks to position itself for the New Economy.

SLIDE 3-4

Southern Growth's Seeing the Future Initiative

Specifically, the Seeing the Future initiative is an attempt to offer an elevated conversation about the New Economy at a time with we all receive megadoses of "blur and churn" and a dizzying pace of information about change. It offers:

- A clear and well-founded grounding in the New Economy based on mainstream economic principles,
- Facts and indices that describe and benchmark the major drivers of the New Economy,
- Insights into how these economic drivers interact to affect daily lives and professional responsibilities,
- Access to information on best practices, and
- Finally, building on this, the Southern Technology Council has launched Invented Here (www.southern.org/technology/projects/invented.html), an initiative to build a living, working strategic plan for the transformation of the southern economy through technology-driven economic development.

But what is the new model for the economy? If you had to choose a single word to describe it, that word would be innovation.

SLIDE 3-5

Innovation is the Primary Driver of the New Economy

Innovation—the relentless, ever-changing process by which products and services reach the marketplace—is the fundamental distinguishing characteristic of the 20th century economy according to Peter Drucker. Innovation affects everything.

How? Innovation brought the internet to the marketplace. It also brought the cell phone, the fax, overnight parcel delivery, spreadsheets, and word processors. Even demographic shifts such as the large elderly population can be traced to innovation—new diagnostic techniques, pharmaceuticals and modern healthcare.

Innovation is the fuel for important economic engines such as globalization, more efficient business practices, nichification, the shift to services, technology and transportation. Innovation in technology and management processes has allowed businesses to become more nimble, less tied to "brick and mortar."

As more businesses become multinational and markets become even more primary, government as we have know it falls into eclipse. As Lester Thurow recently wrote, "National governments are slowly being pushed out of business. Governments have lost much of their influence over the movement of information and capital. They cannot control what or who crosses their border—physically or culturally.

If innovation is the key driver of the New Economy, what are the characteristics that innovation engenders?

SLIDE 3-6

New Economy Characteristics

The New Economy is:

- **Borderless**. Distance has vanished or, at least, its fundamental characteristics have been altered by technology and transportation advances.
- **People-centric**. Workforce development and education is an important policy concerns.
- **Knowledge-Driven.** The richest man in the world owns no land, no gold or oil. He just owns knowledge. This man, Bill Gates, once said, "the beauty of all intellectual property compared to physical property is that there is no marginal cost of production." He thinks the world benefits greatly from this phenomenon.
- **Expanding Free Markets.** Less than a generation ago a substantial portion of the world's population lived in managed economies, economies in which the government dictated the terms of virtually every transaction. Now the good news is that most of the managed economies have fallen. The bad news is that no one is in charge.
- **Cultural Mutations.** Advances in communications and transportation bring differing cultures into new and evolving proximities, increasing the likelihood clash and conflict. Policy responses to more immigrants in America range from a greater emphasis on learning foreign languages to an emphasis on English-as-a-second-language courses, to enshrining English as the official language and expecting all

to comply. Communications advances allow trends and fads that used to take years to unfold to rise and fade in highly compressed time periods.

- **Time-Compressed.** Cisco's Selby Wellman said at the 1999 SGPB annual meeting, "It's not the big eating the small; it's the fast beating the slow."
- **Disorientation.** Future shock did not go away when the book of that name faded from the best sellers lists. The constant acceleration of experience that has taken place over the past 50 years can make it hard for citizens to focus and cope. This increasing sense of disorientation can push people to the fringe and the brink.
- **Redistribution of Wealth.** The new billionaires tend to be in technology and communications. Cisco Systems is worth more than General Motors; AOL was the dominant party in its merger with Time-Warner. Wealth is increasingly concentrated in younger generations, but voting power increasingly rests with older generations.

These various characteristics of the New Economy set up new tensions and aggravate old ones.

SLIDE 3-7

New Economy Tensions

- **Urban-Rural.** State governments will increasingly face allocation of resources questions between urban and rural areas. Do you vote to expand resources in an urban area and perhaps achieve a critical mass that will allow your state to be more competitive? Or do you vote to send those resources into a depressed rural area to give those voters at least some access to the New Economy?
- **Educated-Undereducated.** Tensions will inevitably increase between those who are busy learning and those who are not. This will to a large degree determine new winners and new losers.
- **Inter-jurisdictional.** Tensions will increase between governmental jurisdictions because of government's simultaneous evolution and devolution, the increasing irrelevance of borders. For example, the United Kingdom has embarked on a series of governmental structure changes that are at once evolutionary and devolutionary in nature. Attempts to rewrite the British social contract to take such actions as further limiting the role of the House of Lords may properly be seen as evolutionary. The return of power to a Parliament in Scotland, rightly or wrongly, is devolutionary. Similarly, the splintering of the Balkans into ethnic enclaves is devolutionary, a fallback position from such states as Yugoslavia.
- **Intergenerational.** New knowledge is concentrated in the young while in places like America, voting power may increasingly tilt to older demographics.
- **The Digital Divide.** Those who have access to and know how to use information technology and those who do not.

SLIDE 3-8

How Do We Rise to the Challenges of and Address the Tensions of the New Economy?

What are the answers for such turbulent times? In a word, partnerships. Quoting from the 1998 Commission on the Future of the South, "To build our competitive position, we need to build broader economic partnerships. No state, and certainly no community, can afford to go it alone."

These partnerships must have very specific characteristics:

- Dynamic and flexible
- Cross-domain
- Cross-jurisdictional
- Inclusive

They also must be built on Tom Peters' three premises: trust, reciprocity and results. And they must go away when their purpose is served.

What should these partnerships focus on?

SLIDE 3-9

Partnership Targets

Entrepreneurship. New partnerships must teach entrepreneurial skills, celebrate entrepreneurial behavior and provide seamless delivery of business services.

Lifelong Learning. New partnerships must support the concept of lifelong learning with new awareness of economic realities, new career options training, and new education providers, process and structures. They must prepare knowledge workers.

Wise Investments. New partnerships must make wise investments in three primary areas: physical infrastructure, in capital and in knowledge. Infrastructure investments benefit from the pooling of financial capacity, the power and authority of government, and the practical savvy of the business community. Capital formation is enhanced by government's ability to provide tax-free, risk-sharing vehicles while the business community's involvement increases the chances of market viability for the resulting instruments and procedures. Educational partnerships work best when parents, businesses, non-profits, and others participate with government in the planning and execution of major initiatives.

SLIDE 3-10

A Brave New Future

If we do all these things well, if we fully employ the tools of the New Economy, then we will see better jobs and higher wages in the South and an attendant rise in the standard of living.

We will see a smarter, more informed populace. We will witness the constant triumph of the entrepreneur. Resilient communities will be built upon the strength of their diversity. And we will be in the business of delivering the highest-value added in products and services.

The next module will explore in depth this concept of value-added and how to apply it to Delta communities.

To pursue such an agenda effectively will require some wisdom: we must remember that our charge is to be pragmatic, not dogmatic.

To do it well will also require some courage. Seizing the future requires confronting the future, standing up to it bravely. It means commanding technology as the tool that it is, not shrinking from it or fearing it.

Bill Gates emphasized this point by saying:

> …to the extent that the computer can link people with knowledge and cultures and each other more efficiently than any other technology, it can help push them toward healing the rift that you see. But technology is only a tool, and, like all tools, its effectiveness depends on the skill and intentions of the user. In the end, you have to put your faith in human nature. If you think the invention of the book was bad, then you will feel the same way about the changes that are coming. If the book was a good thing, then these advances carry the empowerment even further.

Module 4. Building Community Competitive Advantage

SLIDE 4-1

Module Objective

The purpose of this module is to describe what it means to build community competitive advantage in your region.

Building community competitive advantage is about creating higher wage jobs and more profits for Delta businesses. It's about building more local wealth, a large portion of which is reinvested back into the community. It's also about developing your economy to the point where more local citizens own or have some control over the resources that produce wealth.

SLIDE 4-2

What is this Really About?

Building community competitive advantage adheres to the adage, "Think Global, Act Local."

1. **Global** doesn't only mean competing in foreign markets but also equipping yourself to compete against well made foreign products and services at home, often in markets that used to be exclusively local.

2. **Local** refers to the fact that to a great extent you are only as good as your supplier, your workforce, your partner, your teachers, your banker, your utility company, etc. This is because in today's more complex marketplace, it's very difficult for firms to know everything they need to know and excel at everything they need to excel at. There's often too much to know and do to be successful unless you have links, alliances, joint ventures or other types of cooperative activities that expand your capabilities.

This module will cover:
- Why Regional Economies Matter Most
- The "Big Point"
- One Law and Two Rules Associated with Community Competitive Advantage
- The Mechanics of Competitive Advantage
- Implications for Economic Development

SLIDE 4-3

Regional Economies Matter Most

When thinking about economic development and competitive advantage, regional economies matter the most. States and counties are political jurisdictions with little relevance to economic activity. It's market areas and productions systems where jobs are created or lost and thus they are where we must focus our attention.

All regional economies have distinctive labor markets, trading patterns, capital stocks, resources, and business cultures.

And of course rural areas have their own distinctive needs, opportunities and cultures compared to urban counterparts. No two Delta regions are alike. It's important to keep that in mind and capitalize on local distinctions rather than try to mold a region in the shape of others.

SLIDE 4-4

The "Big Point"

Building community competitive advantage is a strategy to bolster your community's capacity to create better **jobs** and produce higher **incomes** – now and in the future. The point of this economic development effort is to create higher wage employment opportunities and larger disposable incomes at all levels. Greater disposable incomes can serve as the engine to generate more wealth in Delta communities.

Equity is a key component of this concept. It is paramount that everyone participates in new growth opportunities, not only because it is fair but also because the arithmetic doesn't work otherwise. Economies simply can't progress and compete in more national and international markets if a large portion of the population is left behind.

This may all sound well and good, but you may be thinking, "where do the better paying jobs come from?" Better paying jobs result from bringing "new" money into the regional economy, money that flows at all economic levels. This leads us to One Law and Two Rules.

SLIDE 4-5

One Law: Competitive Advantage

You can't compete without a competitive advantage. This seems obvious but it's easy to lose sight of.

Competitive advantage:

- **For firms** this means a compelling reason to choose your product or service over that of a competitor.
- **For regions** this means the resources that help companies succeed—skilled people, access to more advanced technology, higher crop yields, etc.

How do you build competitive advantage in your community? Through two concepts that we'll explain next: the value-added imperative and focusing on traded sectors.

SLIDE 4-6

The Value-Added Imperative

The bottom line in building community competitive advantage is that your community must sell goods and services that are:

1. Worth more in the (global) marketplace
2. Worth considerably more than the cost of inputs used to produce and sell them.

Though the pace and complexity of market places have changed a good bit over the last two decades, firms still compete and prosper by capturing market share and by maintaining or increasing profit margins. To do this, they must be able to sell their finished goods for more than they paid for the raw material, parts and components needed to make them and to sell their services for more than it costs to produce them. In these volatile, segmented and often lucrative global niche markets they create this difference -- this margin-- by adding value in design, in engineering and function, in precision, in speed of delivery, in appearance and on and on.

Value-added refers to the difference between the cost of what you purchase to make the product or create

the service and the value you receive when you sell it. The price a firm can get is the source for higher wages, more profits, and more wealth.

The bottom line is the more value-added on a per employee basis, the more wealth is created by the enterprise and the greater the economic return to workers, managers and investors. Value added is not strictly a matter of productivity; it also reflects quality and service. Value is not at all the same thing as cost; a firm cannot necessarily add more value simply by reducing cost. The producer establishes cost. Value is determined by the price the customer is willing to pay.

Those firms using relatively basic technologies, low skilled workers and managers, and very traditional business practices are, as a general rule, not able to add a great deal of value to the raw materials and component goods with which they start. They tend to compete only at the relatively low ends of their markets where products must meet far less exacting requirements, where they are less differentiated and therefore tend to compete chiefly on the basis of price.

SLIDE 4-7

The Value-Added Imperative (cont.)

Usually the most critical factor input within these markets for competitive advantage is the cost of labor. A U.S. region's firms are at a competitive disadvantage when they try to compete with other producers in many other countries on the basis of labor costs or, for that matter, on resource cost advantages. In the US, lower value-added manufacturing operations that compete only on a cost basis are, at best, an endangered species. Of course we can't be naïve; often this is the only option. But the key is to find ways to create more value for goods and services and thus sell them for more money, the "new" money that creates better paying jobs.

When you think in these terms, there are no low-tech industries, only low-tech companies. Every industry must use more efficient, more cost effective technology to compete. So it's just a matter of which firms adopt the new technologies and which don't. A company can choose not to participate but regardless the industry will move on and become more competitive through more efficient processes. Those companies that "opt out" are most at risk of failure.

As already implied, technology governs value-added. The only reason we are interested in technology is because of this fact. One way to think about this is that technology is what it takes to maintain or increase gross margins in your market. Technology is a means, not an end; it is a value-adding tool.

SLIDE 4-8

Stick to Traded Sectors

The other rule that builds a community's advantage is to "stick to traded sectors." This means competing in markets outside the region. This can be accomplished through several means:

"Exporting" (selling) goods and services to customers located outside of the region.
Purchasing locally produced goods and services that "substitute" for goods and services that would have been purchased from outside of the region.
Attracting nonresidents to spend money in the region.

Competing outside the region allows you to drive your economy by bringing in "new" dollars. These dollars turn into profits and paychecks that circulate through the economy's "non-traded" sectors (stores, restaurants, bar and barbers, for example).

SLIDE 4-9

Recapping the Two Rules

Rule #1: The "Value-Added Imperative" tells you to focus on pushing to higher value added levels to generate higher paying jobs and more wealth in communities. The good news is that everyone can play and needs to play. This is not a "high tech" strategy. Whether it's producing software, manufacturing furniture, harvesting shellfish, or producing component parts for copying machines, a region's economic progress will be determined by its companies' capacity to increase the gap between what they pay for inputs and their actual selling price. The goal is to produce goods and services that the market will pay more for regardless of the starting point.

Rule #2: "Sticking to Traded Sectors" tells you to focus on the portion of your economy that competes outside the region. When a region "exports" goods and services to other regions it "imports" cash. This means more money that circulates through the economy's "non-traded" sectors.

SLIDE 4-10

The Mechanics of Building A Higher Value-Added Regional Competitive Advantage

There are two essential ideas that help move this discussion from the theoretical to the concrete:

- Clusters
- Wealth Drivers

Both of these will be discussed next, followed by four critical value-adding capacities that can help you start thinking about all of the concepts in this module as they relate to your community.

SLIDE 4-11

Clusters

Firms can't engage in higher value-added commerce without some form of competitive advantage. This advantage is what allows them to command a price premium.

Clusters are a loose, geographically bounded agglomeration of similar, related firms that through a series of interdependent relationships are able to achieve a kind of commercial synergy. This synergy helps create the competitive advantage.

Clustering is a natural phenomenon for value-added businesses. The tendency of businesses to locate near their customers, suppliers, specialized services, and competitors—to cluster—occurs in all places and all industries. Clusters create the capacity for member firms to generate higher levels of value-added than they could if they were not members.

There are certain kinds of clusters that can create higher value-added competitive advantage for an entire region. For example, rural Dalton, Georgia is home to a carpet cluster and Tupelo, Mississippi hosts a large number of furniture companies.

A key for rural areas is not to get too hung up on the notion that only large concentrations of firms matter. Rural areas need to figure out ways to get access to some of the advantages of clustering even without significant numbers of similar firms.

For example, if you have some furniture makers and upholsterers in your community, you probably have

bankers and CPAs who know that industry, maybe fabric suppliers, as well as a workforce skilled in the industry. Those are elements that can be capitalized on and taken to another level—helping companies adopt IT technologies, for instance.

Alliances and business networks are also activities that can give some of the advantages of clustering. Figuring out how to give companies joint access to technology resources, training or specialized services helps them attain efficiencies and information that makes them more competitive. For more information about helping create business networks, click here.

SLIDE 4-12

Know Your Wealth Drivers

The second essential idea is to think about your economy in terms of its wealth drivers. Wealth drivers, as implied earlier, are found in traded sectors—companies whose customers are found outside of the region. While local retailers and services are valuable members of every community, they don't attract "new" money into the regional economy.

It also makes sense to support and develop local or regional firms that supply items to traded sector firms that would otherwise have to be purchased outside the region—machine and tool shops, for example.

Knowing what companies are paying good wages and making investments is also an indicator of important information. You can use the regional wage index as a start and look at what sectors (at the 4 digit SIC code level) in your economy are paying above or below average non-retail wage levels. For more information about how to analyze your economy to identify wealth drivers and clusters, click here.

SLIDE 4-13

The Mechanics: Four Critical Value-Adding Capacities

Beyond the two essential ideas mentioned above, it is also important to think about the "nuts and bolts" mechanics of what leads to higher value-added firms. A great deal of research over the last two decades has been conducted to determine what makes thriving regional economies. The research distills down to four things:

1. Workforce Skills
2. Business Startups (Entrepreneurship)
3. Capital
4. Technology

SLIDE 4-14

Workforce Skills

This refers to the stock, flow and distribution of knowledge and know-how within a region's population; i.e., what you know and how fast you can learn. New jobs generated by new industries require new and/or higher level skills. The pace of technological change and change in work organization continues to transform the skills and knowledge requirements for existing jobs. To a great extent, for many firms their inventory in essence walks out the door everyday.

A well-skilled workforce is a critical component of successful economy. Companies moving to higher value-added markets need workers with more skills who can meet the challenges of the New Economy.

SLIDE 4-15

Business Startups (Entrepreneurship)

By this we mean the ability and willingness of individuals to take risks and to start new companies. While larger, established companies by their very nature most often form the body of viable regional economies, new business starts are the heartbeat. The rate and quality of that heartbeat is a critical indicator of the future vitality of that economy. High growth, high value-added businesses are of particular importance.

Business starts combine existing resources in new ways to create new value. They define an entrepreneurial culture and are important sources of employment, economic, and technological dynamism. They are also growth engines that propel innovation and the generation of new wealth.

SLIDE 4-16:

Capital

The traditional notion of capital is founded on definitions such as "things used to produce things" or "man-made aids to production." While definitional nuances abound, the act of creating capital always involves a current sacrifice for an anticipated future gain. This is certainly the case for two of the most critical types of capital required for generating regional higher value-added competitive advantage. They are financial capital and social capital.

Financial capital is the traditional capital you think of. It has to do with the ability and willingness in a region to finance technology commercialization, business startups, and business expansion.

The ability to finance the development, commercialization, and use of highly competitive technologies, products, and processes is an integral dimension of dynamic higher value-added regional economies. Creative and innovative equity and debt financing approaches and public sector endeavors that encourage such approaches within private markets help define this ability.

To this end, the availability of risk capital is a critical factor for high growth potential and/or technology intensive ventures. Locally managed, early stage funds are particularly important.

Its importance is self-evident: companies can't start or expand if they can't get capital.

Social capital refers to the quantity and quality of economic and civic relationships within a region. In well-developed regions, information spreads quickly, accurately and efficiently. Familiarity creates a foundation of trust and the expectation of reciprocity that "greases" the wheels of commerce.

Certain communities have traditions, cultures, organizations and people that are good at moving the community to get the cooperation necessary to accomplish things. That's social capital.

This is especially important in economies that are striving to produce goods and services that are more valuable. They must be able to create, access and use information well and quickly.

SLIDE 4-17

Technology

The fourth element that matters in successful regional economies is technology. By technology we mean the development, commercialization **(innovation)**, use and adaptation of technology **(deployment)**, and the regional system and culture that enables these activities **(infrastructure)**. As we said earlier, technology governs value-added and that's why we're interested in it.

Innovation is the lifeblood of vibrant market economies. From this approach's perspective, technological innovation is understood to mean the development and commercialization of new technologies and the products, processes, and services in which they are embodied. The production and use of knowledge fuel it. This process embraces not only the technology itself, but also subsequent improvements of value as well as all information and activities relevant to its commercialization. This includes such items as market information, technological knowledge, innovative approaches in existing markets, and innovative entrances into new markets. It is by nature an iterative process. The results can be as big and fundamental as the steel plow, the internal combustion engine, the microprocessor, or a manufacturing process that produces microscopic machine parts. The results can be as incremental as an easy squeeze toothpaste container, a friendlier screwdriver grip, a non-reusable, disposable syringe, or even a better mousetrap.

A region's firms must be good at quickly adapting technologies that were developed elsewhere to their own needs. They must be adept at investing in and using modern, powerful, precise, and flexible technology to gain competitive advantage in the international market place — **technology deployment.**

SLIDE 4-18

Technology (cont.)

Supporting this ability to create, commercialize and use highly competitive technology is a system and a culture that makes it possible. These elements and resources represent the region's **"technological infrastructure."** To a great extent, the quality of the region's technological infrastructure will shape its capacity to support and accelerate technological innovation and large-scale technological deployment consistently and over the long run.

Technology infrastructure elements include higher education research and resources, government and non-profit laboratories and centers, incubators, telecommunications systems, and research parks. When viewed as a group, they perform the same function as the highways, railroads, sewerage systems, and power grids of more traditional industrial development strategies. Like traditional infrastructure elements, they tend to be financed and/or provided by the public sector. There is no prescribed recipe for the optimal "mix" and support level for a region's technology infrastructure portfolio. Rather, it is a function of the region's public and private competitiveness strengths, needs, aspirations and vision.

Technology infrastructure is hard to define—it can be an incubator that gives young companies access to technology, a T1 line, a school with a Geographical Information System lab, etc.

This area is a relatively new consideration for regional economies. Its growing importance reflects the recognition that the public sector can make key strategic investments in a knowledge-based economy just as it has done historically for more traditional industrial development infrastructure elements such as highways, rail spurs, ports, and industrial parks. Technology infrastructure shapes the pace and direction of technological learning within the region's economy.

SLIDE 4-19

Where Do You Start?

These four elements, therefore, are the starting points in moving your region toward a great number of higher value-added markets and thereby increasing wealth in your economy.

1. Workforce Skills.
2. Business Startups (Entrepreneurship).
3. Capital.

4. Technology.

Let's start with "technology." And since "new" money in your economy has to come from somewhere outside of the region, and technology governs value-added, technology is as good a place to begin as any. Later modules will specifically equip you with a process and some tools to assess your own region's technology resources.

Module 5. Understanding Your Economy

SLIDE 5-1

Module Objective

A critical step in assessing your economy is to understand its strengths and weaknesses, and what makes your regional economy unique. The data analyses provided in this module should be conducted by local or state economic development staff or outside consultants **prior** to your Community Technology Assessment. The resulting statistics will be useful starting points to help participants think about the regional economic "big picture" and your relationship to the national economy.

The good news is that many things can be learned by examining data that are available for free on-line or in libraries. These data can include crucial economic information such as employment, population, income, etc. The bad news is it still requires some work to manipulate these data into statistics that are truly insightful.

The purpose of this is to guide you through the process for looking at four regional measures of economic activity and comparing them to similar measures for the U.S. as a whole. These four measures are:

1. Per Capita Personal Income
2. "Specializations" of Employment
3. What Sectors are Growing (or Declining)?
4. What Industries Are Paying Well?

The first section of this module describes where to obtain economic data for your region. The second section provides the steps for the analyses.

SLIDE 5-2

Regional Analysis Makes Sense

It is important to note that for rural areas this kind of economic analysis works best at the regional level. Often small cities and towns serve as regional commerce hubs or function within larger market areas that are anchored by larger cities. In these instances it is important to understand your economy on two levels. First, the local economy needs to be understood on its own terms. What companies or industries are prospering? Who trades outside the region? Are there any groups of similar companies or competitors? Do any of these companies have local suppliers or do any of them function as suppliers to larger manufacturers within the area or region? Who pays well? At the local or county level, much of this information is already known or can be readily assembled.

Second, the local economy needs to be understood in terms of its position and role in a larger regional production system. This 'multi-county" level of analysis is the subject of this section. **Though the examples given later in this module focus on one county for simplicity in demonstration, we suggest that for your analyses you aggregate the data for all the counties in your region and consider them as a whole.**

SLIDE 5-3

Where to Get Your Data

Good information is the key to a good analysis, and knowing where to get the right data from will make your task of economic analysis such easier. Much information is available on-line or in libraries, while some is available only by ordering from the responsible agency. Other useful data sources are listed in the Tools area.

State Data Centers

Each state maintains a centralized data center that acts as a depository on data in a collaborative effort with the U.S. Census Bureau. These centers provide detailed statewide information, and sometimes make available data on a county or local-area basis. The types of published data vary by states, so sometimes you need to contact Center staff to determine what data is available.

Employment Security Commissions

State employment security commissions collect "labor market information" and make such information available to the public. However, when looking for information on a county level, much of that information is suppressed to maintain employer confidentiality.

Nationwide Data

Several data sources offer on-line data available for all states and some sub-state regions. These sources of data are particularly useful when comparing your region to other regions or to national norms. However, as with other forms of data, oftentimes local area information is considered to be confidential and is withheld from publication.

What follows are links to specific data sources and instructions on how to compile the data needed to analyze your regional economy.

SLIDE 5-4

Where to Get Your Data (cont.)

Following are good starting points for information on demography, employment, and other relevant data for communities located in the Delta:

State Data Sources

Arkansas

Arkansas Census State Data Center
www.aiea.ualr.edu/csdc/

University of Arkansas at Little Rock, Institute for Economic Advancement
www.aiea.ualr.edu/

Arkansas Employment Security Department
www.state.ar.us/esd/
*County-level data available by ordering publications, not available on-line.

Louisiana

Louisiana State Census Data Center
www.state.la.us/census/

Louisiana Department of Labor
www.ldol.state.la.us/

Mississippi

Mississippi State Data Center
www.olemiss.edu/depts/sdc/

Mississippi Employment Security Commission
www.mesc.state.ms.us/

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Where to Get Your Data (cont.)

Nationwide Data Sources

U.S. Census Bureau

www.census.gov

The Census Bureau publishes not just population counts, but also counts and tabulations on business activity and a great deal of demographic criteria. From the Bureau's main web page, much useful information can be accessed by following the **Search** link. Within the Search page, follow the link for **Map Search**. The title of this page is "State and County Demographic and Economic Profiles" and is directly accessible at <http://www.census.gov/datamap/www>.

Click on the state you wish to investigate, and from there click on an individual county. Now you can choose between:

- Population figures and estimates,
- County Business Patterns (employment, numbers of establishments, and annual industry payrolls),
- County General Profiles (Various population and demographic statistics).

Government Information Sharing Project

http://govinfo.kerr.orst.edu

This site is a clearinghouse for electronic government data, and includes data from numerous federal resources. Similar information is posted here, as is on the Census Bureau web site, or other federal agencies. However, this site is typically easier to use.

Follow the links to your desired data. Most of the information that you will need is under the links **USA Counties** and **Regional Economic Information System**.

SLIDE5- 6

Conducting Data Analyses

Much information can be collected from the sites described earlier. For analyzing your local economy, the

most useful data are those you can use to "benchmark," or compare, your region's economy against economies of other regions, states or the nation.

The following four examples will guide you through some specific types of analyses, but the same general concepts of analysis hold true for looking at any data, not just the measures detailed in this module. Again, for simplicity's sake, our examples are for just one county. When this is done for your region, we highly suggest that you aggregate data from all the counties in your region and consider them as one unit.

SLIDE 5-7

Comparing Regional Per Capita Income to National Figures

Per Capita Personal Income (PCPI) is a statistic that takes the total dollar value of income and divides it by the number of all people (adults and children) living in an area. It is a general measure of prosperity, as a lower figure indicates a greater incidence of poverty.

Per Capita Personal Income figures are widely used and are therefore available from several data sources pre-calculated, so you do not have to actually do the math yourself. Such information can be found on the web site of the U.S. Bureau of Economic Analysis (www.bea.doc.gov) and from the Government Information Sharing Project (http://govinfo.kerr.orst.edu)

Looking at these income statistics as a percent of national averages enables you to see these trends in *relative* income. To calculate this percentage, divide the PCPI figure for your local area by the same year's PCPI figure for the United States. This is demonstrated below for the 1998 calendar year for Phillips County, Ark.:

$$\textbf{PCPI percentage} = \frac{\text{Per Capita Personal Income for Phillips County}}{\text{Per Capita Personal Income for the United States}}$$

Entering numbers gathered from your choice of statistical web sites will give you the proper percentage. Below is the formula with 1998 numbers for Phillips County:

$$\textbf{PCPI percentage} = \frac{\$15{,}140}{\$27{,}203} = \textbf{55.7\%}$$

SLIDE 5-8

Per Capita Personal Income (Cont'd)

Per Capita Personal Income Trend for Phillips Co., as a Percent of the National Average

Plotting a region's PCPI over time shows how well-off a region is; this holds particularly true when that figure is compared to national averages. The chart below takes a look at the Per Capita Personal Income of Phillips County between 1969 and 1998. The jagged line at the bottom of the chart represents that year's PCPI in Phillips Co. expressed as a percentage of each year's U.S. total PCPI.

Over the 30-year period, Phillips County's PCPI ranged from 52 percent of the national average to a high of 69 percent. But most importantly, the graph shows that there has been no steady increase in relative income over the period.

This method of looking at the data is useful for economic analyses – more useful for our purposes than just looking at raw numbers. It can measure improvements in quality of life very effectively and can frequently demonstrate this difficult concept in an easy-to-understand format.

SLIDE 5-9

Using Location Quotients to Determine Employment Specialization

Location quotients indicate relative areas of specialization within an economy and provide clues on where to begin looking for geographic concentrations of firms that may generate regional competitive advantages.

Location quotients are calculated by measuring the percentage of a region's total employment (or total number of establishments) found within a particular industry, compared to (divided by) the same ratio for the nation as a whole. If the resulting ratio is greater than **1.0**, the region is considered to be *specialized* in that industry. Values over **2.0** indicate highly specialized employment. The higher the location quotient, the more significant the regional specialization. High location quotients suggest that a particular industry is more concentrated in a region than it is in the nation as a whole.

For tips on where to get the data to do location quotient analyses, see the above discussion on **Sources of Data**.

Data is usually available on the county level (see previous discussion on "data suppression" about data that may be unavailable).

To compute location quotients, follow these steps that are for a sample calculation. For this example, we will compute the location quotient for paper production in Ouachita Parish, La.

- Define your geography. In this case we will use just Ouachita Parish, but location quotients can be for multiple-county regions or whole states.
- Decide which industry or industries you will examine. Data are published by Standard Industrial Classification (SIC) code or North American Industrial Classification System (NAICS) code. Many government data sources are phasing out their use of the SIC system in favor of NAICS, which poses some challenges in matching sectors. This should be kept in mind when comparing current NAICS data to previous SIC data. (Just be sure that you are comparing apples and apples.) Each SIC or NAICS is for a specific industry. For this example, we will look at paper production.

  If you are unfamiliar with SIC or NAICS codes, there are many publications available on-line or in print that define each sector. One such on-line source is the Census Bureau's site, <www.census.gov/epcd/www/naics.html>. At this site, you can look up keywords and match them to a certain sector, or see how the SIC and NAICS systems compare to each other.

  Alternatively, once you get to a data source (such as a county's listing on the Census Bureau's web site), you can simply browse the list for the specific industry you're looking for.

- Get your data. For this simple location quotient you need just four pieces of data:

  1) Number of workers in your region who work in a particular industry. Here you may find that employment data are reported in ranges. This is done to preserve the identity of individual firms in instances where the number of firms is very small. When this happens, you may estimate employment by calculating the mid-point of the range indicated by the data suppression code.
  2) Total number of workers in your region (*all* industries).
  3) Number of workers in the nation who work in the same particular industry.
  4) Total number of workers in the nation (*all* industries).

SLIDE 5-10

Location Quotients (Cont'd)

- We can get these data for Ouachita Parish by going to the Census Bureau's County Business Pattern web site <http://www.census.gov/epcd/cbp/view/cbpview.html> and clicking on the link that says **County, State, and U.S. Database**.
- Select **Louisiana** and click **Submit**.
- Select **Ouachita Parish** and click **Submit**.
- This takes you into the Ouachita Parish data page, where you see SIC codes by employment, total payroll and numbers of establishments.
- The first matrix you see covers employment and payroll, while the second covers numbers of establishments.
    - For example, here we can see that 8,627 jobs existed in manufacturing during 1997, and 58,651 jobs exist in total.
- Clicking on the **2 Dgt** button expands the matrix further to include 2-Digit SIC codes. Likewise the **3/4 Dgt** button expands it even further.
- For this exercise, we are searching for SIC 2600 (Paper and Allied Products), which appears after you click the **2 Dgt** button.
    - Here we see that 2,646 jobs exist in Ouachita Parish's paper manufacturing industry.
- To obtain corresponding figures for the U.S. as a whole, return to the main County Business Pattern site and select **United States**, from the available menu.
    - Here we see that the total employment for the U.S. was 105,299,123 in 1997, while the national employment in SIC 2600 (Paper and allied products manufacturing) was 621,072.
- From here, we can set up a simple formula for the location quotient (LQ), by inserting the numbers that we obtained through the process above. The formula for Ouachita Parish's is:

$$LQ = \frac{\frac{\text{\# of U.S. Jobs in Wood Manufacturing}}{\text{\# of Ouachita Parish Jobs in Wood Manufacturing}}}{\frac{\text{Total \# of U.S. Jobs (in all industries)}}{\text{Total \# of Ouachita Parish Jobs (in all industries)}}}$$

SLIDE 5-11

Location Quotients (Cont'd)

What this formula basically does is compare the percentage of employment in a particular industry in both a local area and the nation. As stated above, values greater than **1.0** indicate that the region is considered to be *specialized* in that industry. Values over **2.0** indicate highly specialized employment.

Filling in the information we got from the County Business Pattern web site, enables us to finish the formula:

$$LQ = \frac{2{,}646}{\frac{58{,}651}{621{,}072}} \Big/ \frac{105{,}299{,}123}{}$$

Doing the math in the above formula shows that Ouachita Parish yields a location quotient of **7.65**, meaning that the parish has over seven times the average rate of employment in the industry. Thus, the region would be said to be highly "specialized" in terms of paper industry employment.

While the high paper industry employment is common knowledge to those who live around Monroe, using the location quotient approach shows just how significant that employment is. This is particularly true in the case of industries where employment is scattered among many separate firms, where the specialization would be less apparent to a casual observer than the paper industry example where a few large mills are a very visible and prominent employment source.

When you conduct analyses of your own region, you may be surprised to find specializations that you did not know existed in your economy. Conversely, the specialization you thought you had may be end up being less than expected.

The use of comparative statistics such as these can serve to bring to light regional competitive advantages (or disadvantages) and their impacts on local economies.

SLIDE 5-12

Using Location Quotients to Assess Establishment Concentrations

Examining employment concentrations alone is not always sufficient for identifying sources of regional competitive advantage. Employment location quotients do not provide an indication of the number of firms involved—whether the sector is aggregated, disaggregated, or somewhere in between. For instance, a sector's large number of employees may be concentrated in a single large firm. Location quotients for numbers of firms are important because each establishment represents a locus of activity, a set of business and employment opportunities, and a discrete decision to begin operations or to locate an operation in that specific locale for some specific reason. Thus it is useful to compare location quotients based on employment with location quotients for the same industry that are based on the number of establishments. This can reveal where a particular industry group in the region is more disaggregated than it is in the nation.

Calculating a location quotient for the number of establishments is done using the same formula as the employment location quotient—simply substitute establishment data for the employment data. You may obtain this data online from the same source as the employment data (Census Bureau's County Business Pattern web site <http://www.census.gov/epcd/cbp/view/cbpview.html).

SLIDE 5-13

What Sectors are Growing (or Declining)?

As you may have noticed in the previous exercise, these data are available for many different years. Comparing two years' worth of data can show not only whether employment increased or decreased, but also the extent to which your region has become more or less competitive in a given industry.

For this next exercise, let's look at Washington County, Mississippi and its Fabricated Metals industry. The first step is to select two representative years; one year should be the most recently available year (in this case, 1997) and a prior year (let's pick 1993 as an example). When selecting a previous year for comparison purposes, try to consider the state of the economic cycle during that period of time. You may want to avoid comparing a recession year at a low point in a business cycle to a year in which the economy was booming. This will distort your analysis somewhat.

Taken from the same Census Bureau County Business Patterns web site as the exercise above, we can look up employment figures for Washington County and for the U.S. as a whole. Following the same procedure as above, we can look up Washington County's employment in SIC 3400 (Fabricated Metals) and come up with the following information:

Washington County, Miss.		
	1993	**1997**
Employment in SIC 3400	717	676
Employment in ALL industries	18,851	21,758

Also necessary is the same information for the U.S. as a whole, which can be obtained from the same web site.

United States		
	1993	**1997**
Employment in SIC 3400	1,371,072	1,537,591
Employment in ALL industries	94,789,444	105,299,123

Once we have all this information, all we need to do is calculate location quotients, using the same procedure as the prior exercise, for both of the selected years. For each of the years, we use the following formula:

$$LQ = \frac{\text{\# of Washington Co. Jobs in Fabricated Metals} \;/\; \text{\# of U.S. Jobs in Fabricated Metals}}{\text{Total \# of Washington Co. Jobs (in all industries)} \;/\; \text{Total \# of U.S. Jobs (in all industries)}}$$

1997

$$LQ = \frac{676 \;/\; 21{,}758}{1{,}537{,}591 \;/\; 105{,}299{,}123}$$

1993

$$LQ = \frac{717 \;/\; 18{,}851}{1{,}371{,}072 \;/\; 94{,}789{,}444}$$

Location Quotient	
Fell Between 1993 and 1997 by 16%	
	2.12
	2.62

SLIDE 5-14

What Sectors are Growing (or Declining)? (Cont'd)

As can be seen above, the Washington County's location quotient decreased between 1993 and 1997 for its fabricated metals industry. In this particular example, the number of jobs decreased by about 5 percent, but the location quotient decreased by nearly 20 percent – indicating that the industry is losing employment share in this industry to a greater extent than national trends for the industry. This means that the region is losing competitive advantage for the fabricated metals industry in relation to the nation as a whole. An industry that is declining in concentration may be a target for assistance if it is to remain vital to the regional economy. A declining concentration within an industry may be an early sign that today's economic drivers could be less important to the region tomorrow.

Thus, this type of analysis can inform you about how a specific industry is performing in a region relative to the national employment of that same industry. Sometimes these results can be surprising, such as when an industry has a declining local workforce, but much less of a decline than the industry's national trends would indicate.

In addition to comparing trends in location quotients for employment, it is useful to do the same analysis for establishment location quotients in order to determine if a sector in your region is consolidating or becoming more disperse compared to national trends for that industry.

SLIDE 5-15

What Sectors are Paying Well?

As you may have noticed while doing the previous exercises, in addition to numbers on employment, the Census Bureau's County Business Pattern data also include information on wages paid out by various industries. These wage figures are published as an annual payroll amount for the entire calendar year. Taking this amount and dividing it be the total number of employees for the industry gives you the Average Annual Wage.

$$\text{Average Annual Wage} = \frac{\text{Annual Payroll (in \$'s)}}{\text{Number of Employees}}$$

While interesting, these annual wage figures become even more relevant when compared to the typical wage in the region. This figure can be obtained by calculating the same formula as above, but plugging in figures for the total wages and employment in a county, instead of just the wages for one particular industry.

For an example, let's look at Adams County, Mississippi, and examine one industry. For this exercise, we will pick SIC 5200 (General Merchandise Stores), and follow the same process as described in the previous exercises. To get figures for general retail employment, we will first get the above information concerning the county's total employment and wages – and then the same figures for the specific retail industry.

Using the Census Bureau's on-line statistics, we find that the county had (as of 1997) 12,406 jobs that paid out a total of $239,956,000 in annual wages. Following the link to details on retail employment, one finds that the number of jobs in SIC 5200 (General Merchandise Stores) is 825 and the total annual wages paid by this sector is $8,733,000.

Using these figures, we can calculate the average annual wage for this specific sector by filling in the formula listed above. This ends up being the following:

Average Wage for General Merchandise Stores

$$\text{Average Annual Wage} = \frac{\$8{,}733{,}000}{825} = \$11{,}798$$

Likewise, we can figure out the same average wage for the county's economy in its entirety:

Average Wage for all of Adams County's industries

$239,956,000

=$19,342

Average Annual Wage =

12,406

By comparing the two figures above, one can see that the general retail sector pays wages that are substantially below the county's average wage. When such a discrepancy occurs, it could be due to two causes: 1) that the industry pays low wages, and/or 2) that the industry relies heavily on part-time jobs.

By doing this sort of wage-based analysis, you can see a rough estimate of the wage quality of a given economic sector.

SLIDE 5-16

Conclusion

This module gave you the tools to conduct some relatively easy calculations in order to gain insights on your regional economy and its areas of economic specialization as well as a calculation to assess how the region is prospering in terms of per capita income compared to the national average.

The next two modules will take you through the Community Technology Assessment model and process itself. The final three modules will guide you on how to take the results of the CTA and use them in your community.

Module 6. How to Conduct a Community Technology Assessment—Part 1

SLIDE 6-1

Module Objective

The preceding modules have focused on the changes in our national and international economy and what those changes mean for the Delta. It's increasingly clear that economic development is different today than it was just five years ago. The old model that relies on traditional "hard" infrastructure and recruiting branch plants into a region is no longer sufficient for competition in the new economy. Delta communities need to understand better their own resources and the types of investments and activities they can undertake that will reap the greatest long-term benefits for their local economies.

This module sets the stage for how a community can conduct its own Community Technology Assessment (CTA) in order to equip itself with the necessary knowledge to pursue modern economic development

activities that will support internal growth and development and will attract support from outside the community.

As described in Module 1, the goal of the CTA is to assemble, share, and analyze data about the community. Prior to conducting a CTA, you should have already completed the economic analysis described in Module 5.

SLIDE 6-2

Delta Business Success

It might be tempting to think that the Delta is too far behind to compete in the types of markets and environments inherent to the New Economy. But that's not the case. In fact, there are world-class companies already thriving in the Delta. Below are two examples.

DeltaPhones
DeltaPhones in Delhi, LA uses advanced technology to streamline operations in providing pre-paid phone service. This includes a direct connection to incumbent local carrier through a T-1 and the ability to coordinate transactions and set up new accounts electronically with a local bank in Monroe. DeltaPhones' presence on the internet is vital to its business-to-business transactions and internal operations such as sales representatives and back office staff who use these connections to set-up and process account information.

Viking Range
Viking Range, a high-end appliance manufacturer in Greenwood, MS that sells products around the world, uses technology in significant ways for product development, marketing, and an internal distribution network. Most recently the company developed a business-to-business platform that provides more immediate response and product information to vendors located around the world. In conjunction with these efforts Viking has invested in workforce training to help ensure their employees can respond to changing technologies.

SLIDE 6-3

How Do We Get There from Here?

A key for success in Delta communities is to have more firms like DeltaPhones and Viking Range that compete in markets outside the region and who use technology to increase the value-added of their operations.

The rest of this module describes the Community Technology Assessment model and how it is useful in helping bring together stakeholders in your community to examine technology resources and linkages among businesses, education providers and other organizations. The results of the CTA can then be used to create a strategic plan that builds on the identified resources and relationships to create stronger synergies to support the development of successful firms that compete in national and international markets.

SLIDE 6-4

The Community Technology Assessment Model

Before describing the process for conducting a Community Technology Assessment, it's important to describe the underlying model.

Communities like Silicon Valley don't happen by accident. Their origins, like most communities, are based on trade routes, availability of land, concentrations of natural resources, or other unique features. Such

successful communities are marked by emergence of unmistakable reinforcing resources, which, in this model*, are represented by concentric circles of reinforcing resources: (1) at the core are a grouping of successful firms; (2) they are surrounded by suppliers, other support companies, business partners (e.g., banks), and competitors and collaborators; (3) they are surrounded in turn by supportive soft infrastructure such as community colleges, universities, industry associations, and other organizations that are important for high performance firms, including local culture and the social infrastructure; and (4) the physical infrastructure, which gets most of the traditional economic development attention. This last element includes both traditional hard resources and "new" hard resources such as high bandwidth internet access.

The diagram below illustrates these concentric circles:

*This model is based on the work of Ifor Williams, a network consultant in New Zealand.

SLIDE 6-5

Linking This Model to a Community Technology Assessment

The model just described gives a framework for a Community Technology Assessment. Successful technology-based economic development is not a one time, static event. Instead, it's a continuous three-stage process of assessment, planning and implementation. When approached in this manner, the CTA is the assessment stage. It gives a community valuable information and a framework upon which to build cohesive economic development actions. Planning and implementation based on the CTA will be discussed

in Modules 8, 9 and 10.

Now that we have described the CTA model, we will introduce the steps that a community should carry out in order to conduct its own CTA.

SLIDE 6-6

CTA STEP ONE: Identifying the CTA Team and Team Leader

The first step is to establish a small CTA team comprised of residents of your community. Residents know the most about your community and are best qualified to work together and go through this process as a group. The CTA is in part about marshaling local resources and changing the way communities think about their economies, so it's important that the CTA be carried out with community resources.

Select CTA Team Leader

For a community conducting its own CTA, a team leader is needed. This person is responsible for identifying team members, arranging locations for assessment meetings, inviting team members to the assessment meetings, and serving as, or identifying someone to serve as, the convenor of the sessions.

SLIDE 6-7

Identify Potential CTA Team Members

Potential team members are likely to be leaders of private, public and non-profit organizations located within your community. They should be individuals who are knowledgeable about the community and its institutional resources. The wealth-generating firms identified through the economic analysis as outlined in Module 5 are some of the key private sector representatives you should include.

The characteristics of the CTA team are that it is:

- Inclusive. A demographic cross section of the community should be sought.
- Knowledgeable about the community. Team members should be familiar with the unique features of the community's history, culture, and economy.
- Knowledgeable about major community resources. Team members should be able to identify the major business, industrial, governmental, academic and non-governmental organizations in the community.
- Size. Knowledge is more important for the assessment team than number of people involved. The number should be large enough to be inclusive of divergent knowledge, but not so large as to present management challenges or to inhibit individual participation. **The size of the group should be from**

10 to 18 people.

SLIDE 6-8:

Logistics

The next step is to convene the CTA meeting. Some logistical matters need to be addressed prior to the meeting.

- Identify the location for the assessment meeting. The room should be large enough to accommodate about 20 people comfortably. Seating arrangements can be flexible, but should encourage discussion. Experience shows that seating around a table is effective. The room should also accommodate audio-visual equipment that might be used for presentations and recording information.

- Invite team members to the meeting. Ideally, intended invitees can be given early notification of the date of the meeting with a post card that requests that the date be saved and that a letter of invitation is forthcoming. A more formal invitation should follow with additional details about the time, place and purpose of the assessment. Click here for an example of an invitation letter and a sample agenda for an initial CTA meeting.

- Serve as, or identify someone to serve as, the chair of the session.

Slide 6-9

Next Steps

This module discussed the underlying model for the CTA and the initial steps that need to be taken in order to start the CTA process. Module 7 will take you through what will actually happen just before and at the CTA meeting.

Module 7. How to Conduct a Community Technology Assessment—Part 2

SLIDE 7-1

Module Objective

The objective of this module is to give CTA leaders an understanding of the activities that should take place immediately prior to and during a Community Technology Assessment (CTA) meeting. Before this meeting, you should have already conducted economic analysis (see Module 5) to help better understand the economic drivers in your region and you should have already established a CTA team to lead the process (see Module 6).

SLIDE 7-2

Prior to the CTA Meeting

Identify Leadership: In order to run the CTA smoothly, community leadership within the team should be clear. In addition to the chair, there should be a secretary with responsibility for taking notes and keeping records. Furthermore, the leadership structure should reflect the needs or practices of the community; for

example, it might be decided that there should be co-team leaders in order to increase effectiveness.

If the team leader is not the chair, the team leader should be introduced.

It helps if this process is facilitated by someone with technology-based economic development experience.

Convene the CTA Meeting

The following is an outline of what happens at a CTA meeting. A Facilitator's Guide for the CTA may be found here **(make a link to Facilitator's Guide)** or by going to the Tools section for Module 7. The Facilitator's Guide is a detailed, step-by-step guide to the CTA meeting and is very useful. Below are the highlights of what should take place.

- *Review Charter*: The assessment team needs to know its purpose, which in general is to assemble and share information about the community. If there is purpose in the assessment team's continued existence, for example in the case that a new opportunity arises, that purpose should be incorporated in the team's charter at a later point.

- *Review Goals:* The major goal for the initial meeting is to compile a list of technology resources in the community. The resources being sought generally fall into four categories: (1) value-added companies (as described in Module 3), (2) business partners of such companies, (3) the parts of the "soft" infrastructure of the community that are connected to (1) and (2), and (4) the traditional (or "hard") infrastructure. These will be described in more detail later in this module.

- *Establish Timeline.* Set deadlines for the assessment team to meet and finish required tasks.

- *Charge the team to accomplish the steps outlined below.*

SLIDE 7-3

CTA STEP ONE: Assessing Community Economic Development Values

It's insightful to understand how team members consider economic development. One way to assess their values is to ask members to each respond to three different questions:

1. Over the next year, you have $100,000 to spend on economic development focusing on technology-based or other kinds of business. How would you divide your money between the following three categories? You may put all of your money in one area, or divide it among two or three areas. Explain why.
   - Recruiting business from outside your area.
   - Helping existing businesses in your community.
   - Helping to start new locally-owned businesses.

2. Over the next year, you have $100,000 to help the community with economic development issues, How would you divide your money between the following three categories? You may put all of your money in one area, or divide it among two or three areas. Explain why.
   - People (e.g., education, training, human resource development).
   - Technology transfer or developing new technology with the potential of benefiting your community.
   - Financial investments (e.g., making capital available to existing or new local businesses).

3. Bill Myers is the president of the Internet Council. He has made the claim that the internet is changing everything. Do you agree? Yes or no. You may expand if you like.

Ask CTA team members to answer these questions independently on index cards (see Facilitator's Guide for details). After the meeting, you can add up the numbers for the first two questions and see how the community would apportion the resources. For the last question, you can count how many agree or disagree and why.

SLIDE 7-4

CTA STEP TWO: Identify Community Technology Resources

This part of the CTA results in a compilation of technology resources in the community.
Tasks during this step are to identify community technology resources in the four following categories:

1. *Identify Firms* that are growing, are high in value-added, employ knowledge workers (i.e., employees whose value is measured not by what they do, but what they know), and firms that export goods and services nationally and internationally.

   These are firms that are not endangered by global competition, but rather are successfully competing in national or international markets. They are the kinds of firms around which future economic growth will occur. Be alert for clusters of similar firms in your community. These may represent a critical mass that can be built upon for future economic growth. Even if there is only one such firm in your community, the assessment can focus on that one company.

   Module 5 gave guidance on how to identify these firms through some data collection and analysis. In addition, your team members may already be aware of many of the firms that fit this definition.

2. *Identify Business Partners* (such as banks, law firms, accountants, etc.) and clusters or networks of suppliers and other small firms that are important to supporting the firms above.

   It is likely that CTA team members are somewhat aware of who these companies are. However, after the meeting it may be useful to interview senior managers at the companies above to find out what other companies they buy and sell from in the local economy.

SLIDE 7-5

Identify Community Technology Resources (cont.)

3. *Identify Aspects of the Soft Infrastructure that Support Technology*. It is important that the CTA team identify traditional community resources. Many of these will be technology-related resources, which might include universities, research facilities, colleges, training facilities, schools, public school technology and computer labs, hospitals and clinics, government offices, non-governmental organizations are of interest. Other features (including environmental and natural resources) that give the community its culture, values, and unique character should also be identified.

   During this part of the CTA process, the expectation is that team members will discuss their soft infrastructure resources extensively and reveal the diversity and breadth organizations that support technology-based economic development. Another value of this list is that it begins to show that the resources of a community may be located outside the geographical boundaries of the community.

   Click here **[see Typical Soft Infrastructure Resources below]** to see an example of a list of the types of organizations that you would typically find as soft infrastructure that supports technology.

Typical Soft Infrastructure Resources

- Businesses
- Hospitals and Clinics
- TV & Cable
- State and Local Offices
- Public Schools
- Community Colleges
- Universities
- Citizens
- State Community
  - Chambers
  - Civic Organizations
  - Economic Development
  - Research Centers
- International Community
- Justice and Public Safety
- Telecommunications
- Libraries
- Non-profit organizations
- Agriculture
- Tourism

For examples of what resources two communities developed as they inventoried their soft infrastructure resources, follow the links below. These examples **[see Community 1 and Community 2 Resources below]** illustrate the diversity of soft infrastructure resources in communities.

Community 1 Soft Infrastructure Resources

The following list is representative of one community's discussion and is presented in the order of discussion. The soft infrastructure identified by the CTA team includes the following resources:

a. Hospital.
b. University campus with special mention of the University library.
c. Community school districts.
d. Baseball and soccer teams were mentioned in the context of youth sports.
e. Churches, which facilitate socialization, even with folks from the campus.
f. The local concert association.
g. Outdoor activities such as fishing and hunting.
h. A safe and stable environment in which to raise children.
i. A spirit of cooperation between the city and the county.
j. A one-stop workforce training center for customized training.
k. An excellent public library.
l. Planned growth.
m. Our people are an asset; they follow through and are change agents.

Comments
- The university campus seems to be underutilized. Is there a barrier?
- Need shopping; people leave to go shopping and to enjoy fine dining.

Community 2 Soft Infrastructure Resources

Sometimes, a community might depart from the expected as the assessment team tackles the list of soft infrastructure resources (e.g., schools, medical clinics, etc.). In one community, a participant began by saying, "I think we are trying to compete by using only half of our resources." This launched an honest, hour-long discussion about race and the role it plays in the community's image and economic

development activities. Several opportunities for the community evolved from the discussion. Though unplanned, and not directly related to technology, the discussion was important.

At one point in the discussion about race, the facilitator told the story about Trent Williams' cocktail party conversation with an economist about uneven economic development in post World War II Italy. The conclusion to the story is that the communities that did better economically had more choral societies and football teams, which served as forums for communication and proved to have value that the economist called social capital. Trent elaborates on this by pointing out that this is a new kind of capital. It is based on economic and civic relationships. When a region has social capital, information spreads quickly, accurately, and efficiently. The familiarity creates a foundation of trust and expectation of reciprocity.

SLIDE 7-6

Identify Community Technology Resources (cont.)

4. *Identify Hard Infrastructure Needs.* Hard infrastructure includes both the traditional and "new" resources for economic development such as transportation, utilities Internet access and teleconferencing facilities. This resource list may have already been compiled by the community. Several states' commerce and economic development agencies have community profiles that provide a good starting point for the activity.

   You may need to compile two lists. The first is the list of existing resources; the second is the list of resources needed in the future. The second list, offers opportunities for action. For example, the list can be used in the exercise developed in Missouri where the practice is to prioritize (show me the data), organize (collaborate around issues), and energize (look for new, innovative opportunities).

SLIDE 7-7

What Will this Information Lead to?

After the CTA team has compiled the information in Step Two, the next step is to organize and analyze it so that it provides insight as to what technology resources exist, what linkages there are among firms and resources, what "pieces of the puzzle" may be missing with respect to technology resources and links among those resources, where resources and relationships might be better supported by the community, and what next steps can be taken to spur the development of globally competitive firms and workers.

SLIDE 7-8

CTA STEP THREE: Mapping Relationships Among Community Technology Resources

A useful way to consider the relationship among the Community Technology Resources the CTA has identified — businesses, support organizations and infrastructure — is to have the CTA team members rate the relationships among them using the matrix below.

More detailed instructions on how the CTA should use this matrix is found in the Facilitator's Guide (make link to Facilitator's Guide in Tools section for Module 6). Essentially, however, at the CTA meeting, the CTA team leader fills in the names of the core firms, support organizations, and soft infrastructure resources that team members have identified (see Module 6). The CTA team leader then asks each participant to give a score of 1 to 5 to rate the perception of the strength of the relationship between any two of these resources.

	Firm A	Firm B	Firm C	Firm D	Firm E	Support 1	Support 2	Support 3	Support 4	Support 5	Soft a	Soft b	Soft c	Soft D	Soft e
Firm A															

Leave blocks above the line blank. On a scale of 1 to 5, with 5 being the strongest and 1 being the weakness, please give your perception of the strength of relationship that exists between each entity listed. For instance, firm B (side row) has a 5 relationship with Firm A (top row); Support 1 (top row) has a 2 relationship with soft b (side row). Continue working until each block in the bottom half of the matrix is filled.

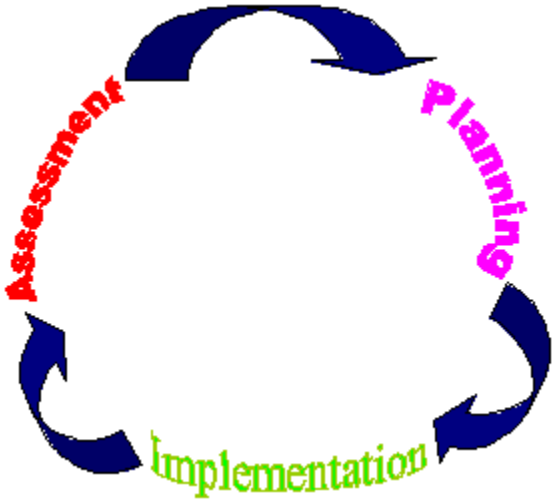
Firm B	5														
Firm C															
Firm D															
Firm E															
Support 1															
Support 2															
Support 3															
Support 4															
Support 5															
Soft a															
Soft b						2									
Soft c															
Soft d															
Soft e															

SLIDE 7-9:

CTA STEP FOUR: Pulling it All Together

In Module 6 we set forth a three-stage process for successful technology-based economic development: assessment, planning and implementation. After holding a CTA, you have completed the assessment stage and it is time to turn your attention to planning and implementation.

Creating a community technology strategic plan based on the results of the CTA is a logical way to start the planning process. A strategic plan will allow you to analyze all the information collected during the CTA and plan for the future in a way that builds on your technology resources and relationships. Module 8 will describe how to go about creating such a plan for your region.



Module 8. Developing a Community Technology Strategic Plan

SLIDE 8-1

Module Objective

In Module 6 we discussed how a Community Technology Assessment (CTA) is a three-stage process—planning, assessment and implementation. The previous three modules gave you tools to better understand your economy and its wealth drivers and how to conduct a CTA.

This module and the following two will give you ideas on how you can take the results of your CTA and implement and assess them in ways that will help increase your region's competitive advantage and levels of value-added commerce.

A strategic plan can be useful to direct your implementation efforts. The purpose of this module is to outline how to use the CTA as the foundation for a community technology strategic plan.

While the following is a good starting point, there are many other resources available to aid in developing a strategic plan. Some of these are listed in the Tools section.

SLIDE 8-2

Benefits of a Community Technology Strategy

Why develop a community technology strategy? Because it is essential in attracting or retaining high value-added industry, it can help steer K-18 education providers, helps prevent "brain drain", and puts you on a path to higher wage jobs and wealth creation in your region.

Why do you need a specific, written plan? A written plan is important because it focuses and motivates action, promotes community learning, is accessible, can be upgraded and because it can be "held up and pointed to at meetings." It is a vision and a path around which a community can rally.

The process of strategic planning is effective because it requires a community to focus, in a structured manner, on the critical strategic issues it faces and to develop a concrete plan of action to strengthen its competitive position. The process will help identify priorities and resources and build consensus around

what should be done and by whom.

SLIDE 8-3

Ineffectual Strategic Plans

It is important to point out that there are many strategic plans that are destined to fail. Common characteristics of ineffective strategic plans are ones that are:

- Devoid of economic and organizational analysis
- Full of Impossible dreams, puffery
- Without action maps
- Born from a non-participative process
- Stealth plans (e.g., invisible)

SLIDE 8-4

Steps and Elements of a Community Technology Strategic Plan

These are the critical pieces to an effective strategic plan:

1. An economic assessment of the community (you already did this in Module 5)
2. S.W.O.T (strengths, weaknesses, opportunities, threats)
3. Vision
4. Strategies
5. Recommended actions

In addition, it is useful to have specific substantive foci on areas such as:

- Workforce
- Research & Development
- Entrepreneurial infrastructure
- Technology commercialization
- Capital
- Public policies

Next, we will walk through each of the five elements listed at the top.

SLIDE 8-5

Community Economic Assessment

By undertaking the economic analysis of your region as described in Module 5, you will learn where your region's per capita income stands relative to the nation's, what industries are located in your community to a greater extent than in the nation as a whole (i.e., what regional economic specialization there is), and whether these economic specializations are growing or declining. You will also find out what sectors are paying the most in your region.

This information should be included in the introductory portion of a strategic plan. In addition, you should canvass secondary data sources to find statistics that describe both the traditional economy and any emerging high tech economy, such as:

- "non-economic" indicators (e.g., human resources)
- comparative benchmarking data that is informative and motivating

Another essential element to include in this of this section of the plan is qualitative data. For example, it is useful to interview heads of technology-intensive firms in your region to find out what their plans are in terms of workforce, technology usage, etc.

SLIDE 8-6

S.W.O.T.—Strengths, Weaknesses, Opportunities, Threats

Next is the S.W.O.T analysis. It should capture in a 4-6 page summary what exists and what is possible (or not). It should draw from more extensive and quantitative community assessment.

The process of assessing strengths and weaknesses is primarily internally focused. It should reflect an honest consideration of your community's economic development assets and liabilities and could include areas such as:

- Demographic trends
- Industry base
- Taxes
- Available land and housing
- Transportation infrastructure (roads, rail, air, water, etc.)
- Technology infrastructure (bandwith, computer access, etc.)
- Education and training system
- Entrepreneurial capacity
- Availability of financial capital
- Community leadership
- Political conditions
- Perception of your community

Identifying the strategic opportunities and threats facing your community is much more focused on external factors. Here you should be concerned with the extent to which regional, national, and global economic trends will affect your community. You should also pay attention to the actions of "competitor" communities and regions.

A successful S.W.O.T. leads naturally to subsequent strategies for implementation.

SLIDE 8-7

Developing a Vision

It is important that your technology strategic plan be guided by a shared, overarching sense of what your community wants to accomplish once the plan has been implemented. A vision embodies a realistic forward-looking image of what your community can achieve and become if certain steps are taken. David Kolzow (1999) describes a community's vision for itself as follows:

- An ideal and unique view of the future
- Flows from the knowledge and experience of the leaders
- An attractive and desirable target
- Must be clear and perceived as attainable
- Gives a sense of purpose to the actions of the community and its organizations

Community leaders can be engaged in the process of developing a vision by soliciting their input through the use of surveys or interviews. Stakeholder involvement in the visioning process can also be facilitated via small groups in a workshop or retreat setting (Kolzow, 1999).

SLIDE 8-8

Articulating Strategies

The next section of your community technology strategic plan should be strategies for implementation.

Coming up with the strategies to lead your region forward is a creative, judgmental process. The important thing is to identify the 4-6 “best bets" for moving the community forward. These should include both long-term and shorter-term strategies.

For example, strategies might involve exploiting a competitive strength, fixing a fatal weakness, or investing in a short-lived opportunity.

Key points to keep in mind about articulating your strategies:

- Present the analytic rationale for why a particular strategy should be pursued.
- If possible, describe the experience of other communities who pursued a comparable strategy.
- Some strategies (e.g., making State U. super) will subsume several more specific actions.
- Preferably target certain traded sectors and industries (see Module 3).

SLIDE 8-9

Recommended Actions

The next section of the plan is recommended actions. It is important that they are indeed “actionable” and describe specific activities, actions, or programs that will help to accomplish a strategic goal. It is useful to describe by example - “best practices” benchmarking is one way to do that.

This section should also:

- Describe what objectives will be accomplished if actions are implemented.
- Identify time frame (e.g., near term/long term) for implementation.
- Identify lead responsible organization(s) and key partner organizations.
- Specify resources ($) needed, whether one-time or continuous support, and likely sources.
- Identify milestones and products.

SLIDE 8-10

Organizing for a Community Technology Strategic Plan

Now that we’ve described the key elements in a strategic plan, we will overview the process for conducting one.

Planning Participants

- A lead organization should manage the planning process from start to finish - up to actual implementation.
- Lead organization can be community-based or external paid consulting entity.
- Planning Committee should be multi-sector in its composition, with a particular tilt toward technology-oriented organizations.

Planning Processes

- Small (4-6) steering group plus much larger number of intermittent participants (30-50).

- Break down planning into tasks, with different people providing task leadership.
- Short (1 hour maximum), frequent (at least every 2 weeks) meetings, with a written agenda.
- Meeting discussions, decisions and "to-do" items should be captured in brief, and circulated within 24 hours.
- Interim products (e.g., draft reports) should be widely circulated among committee, and suggestions for changes addressed.
- Major products should be exposed to public discussion and feedback.
- Planning team should strive to have all products visibly "owned" by community power elite, public and private.

The Strategic Plan Report

The strategic plan report should include a concise Executive Summary and attractive, easily understood graphics. You should package it with a short press release. It is a good idea to have it "introduced" by politically important community leaders from the public and private sectors.

SLIDE 8-11

After the Plan

The following are important things to develop to guide the strategic plan's implementation.

Implementation Details for Each Recommended Action

- First annual budget, organized by expense categories.
- Position descriptions and responsibilities.
- Organizational structure.
- Start-up tasks, organized by quarter, with assigned responsibilities and milestones.
- What actually happens.

Implementation Strategy Issues

- Which actions should be implemented and in what order?
- Mix of actions: some with likely short-term impacts; others long-term payoff.
- How do we maintain the vision and enthusiasm?
- When do we revisit or renew the Plan?

References and Additional Resources for Strategic Planning

Kolzow, David. 1999. Strategic Planning for Community and Economic Development. Presentation given at the 27th Annual Economic Development Course at the University of North Carolina-Chapel Hill. Lockwood Greene Consulting.

Kolzow, David. 1999. "A Perspective on Strategic Planning: What's Your Vision?" Economic Development Review: Strategic Planning Issue, 16 (2).

SLIDE 8-12

Conclusion

Now that we have offered a primer on technology-based strategic planning, the next module will turn to another topic that is important to communities—leadership. We will explore how and why leadership is

important and offer resources for building leadership capacity in your region.

Module 9. Building Leadership Resources

SLIDE 9-1

Module Objective

The Lower Mississippi River Delta is a unique geographic region, with a proud heritage, a rich, ethnically diverse culture, and a reputation for pioneering cutting-edge agricultural technologies. Like communities across the United States, the Delta is working to adapt to shifting economic conditions and the ever-increasing pace of technological change. One thing that can make the difference between success and failure in adapting to today's New Economy is effective community leadership.

The objective of this module is to explain the importance of strong leadership in achieving significant economic development change in your community, highlight the characteristics of effective leadership, and direct you to resources that can help your community make the most of its leadership potential.

SLIDE 9-2

What Do Leaders Do for Their Communities?

Articulate a vision for the community. We all have ideas about the future we want for our communities – high-skill jobs for the workforce, high-quality education for our children, equal access to economic opportunity for everyone – the list could be miles long. But to inspire action, a list of ideas is not enough – these ideas have to come together into a clear, concise statement of the community's vision for its own future. This vision must be grounded in present realities, yet represent an ideal of excellence for what the community can become. Community leaders guide community members through the process of defining their individual visions, finding areas of commonality with other community members, and finally uniting these individual ideas into a common, shared vision to which the community as a whole can aspire. The leaders then help to communicate this vision to the entire community - bringing people together in believing that they can influence their future.

SLIDE 9-3

What Do Leaders Do for Their Communities? (Cont.)

Move the community from vision to action. The vision is only the first step in community change. Once you've figured out where you want to be in ten years, how do you figure out what you're going to do next week? Community leaders help turn the vision into priorities, priorities into specific goals, goals into strategies and strategies into action plans. Leaders help everyone in the community to see the connection between their shared vision of the future and the steps that must be taken to get there – inspiring and motivating the community to keep working toward goals that sometimes seem far away.

Create and reinforce a collaborative, team-based approach. It's been said that the purpose of leadership is not to create followers, but to create more leaders. The best leaders know that they alone, no matter how strong they are, are not a sufficient force for economic development; they also know that the community's most valuable resources lie in the knowledge, skill, expertise and ingenuity of its members. One of the most important functions of community leaders is therefore to tap the community's latent human resources. Leaders identify and recruit the community members with energy, expertise, and talent to contribute to achieving the community's vision.

The leaders further know that to fully realize their potential, these community members must be more than a collection of individuals. To be a force for community development is a challenging task in a time of such rapid change. Technological requirements and opportunities seem to be evolving constantly, and there is a near-infinite flow of information to absorb and process before a community can begin to devise solutions to its challenges. No one person can understand or process all of this information – but a team can do it if its members are willing to view each other as part of a collective learning process. Community leaders create and foster these collaborative learning environments.

SLIDE 9-4

Leadership in the Delta: So What Do We *Do*?

Leadership is important for significant economic change – but it doesn't happen by itself. There are several things communities can do to identify and develop the leadership that will help guide their community toward its vision for the future:

- Identify and coordinate those already most active in the community.
- Develop and enhance existing leadership.
- Tap sources of unconventional leaders.
- Nurture youth leadership.

The next part of this module will describe each of these actions.

SLIDE 9-5

Leadership in the Delta: So What Do We *Do*? (Cont.)

#1: Identify and coordinate the STP. Many communities have a core group of local activists – people who consistently roll up their sleeves and do their best to meet community needs. These are the people who are consistently willing to work together to develop the local economy and their community's quality of life, and who are critical to the success of any significant community development initiative. One TEAM DelTA community has a name for this kind of work team: the "STP," or "Same Ten People."

You may already know who your community's STP are – those people who really seem to have the dedication, commitment, the "fire in the belly" that's needed to turn the community's vision into reality. Every community has them in some form – it's not the number that matters as much as the consistency and energy that this team provides. They're the ones who are always there when there's a problem to be addressed or work to be done – they may not immediately have every answer, but they are always willing to work together to devise a solution. The first steps in establishing the leadership necessary to achieve true change for your community is to identify your STP core team, bring them together, and get them talking to begin the process of articulating a vision for the community.

SLIDE 9-6

Leadership in the Delta: So What Do We *Do*? (Cont.)

#2: Develop and enhance existing leadership. Contrary to the old saw, true leaders are not born – they are made. A leader is someone who is committed to a shared vision for the greater future of the community, and who is willing to work with others until that vision is realized. Any other skills that leaders need to fully realize their leadership potential can and should be taught – communities must invest in developing the skills of their leadership base through conferences, classes, and workshops. The investment is recouped several times over as leaders become more effective and achieve real change for the community.

SLIDE 9-7

Leadership in the Delta: So What Do We *Do*? (Cont.)

#3: Tap sources of unconventional leaders. Sometimes the sources of community leadership are obvious – elected officials such as school board presidents, civic leaders such as Chamber of Commerce officers, and private sector leaders such as industry executives. Sometimes, however, the leaders that can create the most effective approach to a particular problem may be people who don't realize the value of their expertise – people close to the problem whose can offer fresh, innovative perspectives and ideas. Examples of unconventional leaders are librarians who understand the community's information management needs; teachers who can inform an education improvement strategy; civil servants with ideas about how to make local government more effective; people connected to their neighbors who can help garner support for political measures. Tapping into these new sources of leadership helps avoid burnout for the STP core group; instead of trying to do everything themselves, this core team can delegate and collaborate.

SLIDE 9-8

Leadership in the Delta: So What Do We *Do*? (Cont.)

#4: Nurture youth leadership. Working toward the future of the community is not a five-year, ten-year, or even twenty-year journey; it is a continuous process of improvement and reassessment. As important as it is to identify the leaders that can get your community started today on the path to its future, it is just as important to begin developing the next generation of leaders that will sustain and expand upon your efforts. Youth leadership programs encourage public service, local commitment, and a desire to secure their futures by working to achieve a higher quality of life within the community. By stimulating young people's leadership skills and tying these skills to an interest in their future of their communities, these programs can also help encourage young adults to remain in their communities after graduating from high school, rejuvenating the local talent pool and bolstering the local economy. Many Delta communities administer these programs through their local Chamber of Commerce, schools, churches, or civic organizations.

Do you think this all won't be as easy as it sounds? You're right. The next section will offer resources that your community can turn to for help in identifying and developing the leadership skills that your community already has, for finding unconventional sources of leadership, and for nurturing the next generation of leaders.

SLIDE 9-9

Resources for Developing Leadership in Your Community

The Heartland Center for Leadership Development
http://www.4w.heartland.index.html
The Heartland Center offers a wide variety of inexpensive publications that offer practical advice for leadership development and strategic planning for communities. It also hosts an annual institute on leaderships skills and several smaller workshops each year.

The Center for Creative Leadership
http://www.ccl.org
The Center for Creative Leadership offers customized training programs for leaders in private, public, and nonprofit sectors, and many publications on leadership.

The W.K. Kellogg Foundation

http://www.wkkf.org
The Kellogg Foundation website offers several free and downloadable documents on grassroots leadership and how communities can develop their leadership capacity to achieve social change.

The National Association of Community Leadership
http://www.communityleadership.org
NACL hosts an annual conference on community leadership and publishes several how-to and basic information titles on leadership development.

SLIDE 9-10

Resources for Developing Leadership in Your Community (Cont.)

The Greenleaf Institute for Servant Leadership
http://www.greenleaf.org
The Greenleaf Institute pioneered the concept of "servant leadership" – a philosophy of leadership in public service – and hosts workshops and conferences dedicated to helping public and private sector leaders develop their leadership skills. It also publishes many titles and papers on leadership development.

The James McGregor Burns Academy for Leadership
http://www.academy.umd.edu
The Burns Academy offers, through its website, a wide variety of academic papers on various aspects of the philosophy of leadership. It also offers customized training and consulting services to leaders from all sectors, and hosts workshops and conferences on leadership development.

The Center for Community Change
http://www.communitychange.org
The Center for Community Change offers free, downloadable, practical and how-to guides for community and organizational development. They also offer scholarships to selected organizations and individuals to receive technical assistance and training; applications are online.

The Center for Community and Economic Development, University of Southern Mississippi.
http://www.cice.us,.edu/ecdev
The Center for Community and Economic Development, together with USM's Department of Continuing Education and Distance Learning, offers a week-long course for local economic development leaders, along with other workshops and training opportunities.

The Southern Rural Development Center, Mississippi State University
http://www.ext.msstate.edu/srdc/resources/communitylead.htm
This SRDC web page offers a wide variety of free publications that provide practical advice for community development organizations and leaders. The page also offers some links to other leadership resources.

The Peter F. Drucker Foundation for Nonprofit Management
http://www.pfdf.org/leaderbooks/l2l/index.html
The Drucker Foundation offers a variety of books and articles on leadership. The content of the journal "Leader to Leader" are available free on the website.

Move the Mountain Foundation
http://www.movethemountain.org

The Move the Mountain Foundation offers a variety of leadership development workshops, including ones that focus specifically on community collaboration and strategic planning.

SLIDE 9-11

What's Next?

The following—and last—module addresses a final topic of importance—measuring your community progress. While there are a number of ways and measures to evaluate a region's economic and social situation, we will suggest benchmarking your community against others using comparative statistics.

Module 10. Measuring Community Progress

SLIDE 10-1

Module Objective

A final but critical step in the process of planning for technology-based development is evaluating the extent to which the goals and objectives set forth in your strategic plan have been met. The evaluation process is a means by which to monitor progress toward both short- and long-term goals as well as assessing the performance of your community relative to comparable communities within and outside the region. The objective of this module is to introduce you to a framework for measuring your community progress.

A variety of evaluation methodologies can be used to measure the progress of your community's technology strategic planning efforts. A commonly used approach is that of benchmarking. The term benchmark has its roots in the field of civil engineering and in its most basic sense refers to a reference point from which measurements can be made. In practice, we distinguish between a benchmark or reference point and the process of benchmarking, which is the search for best practices (see Lacy and Gibson 1999, http://www.comm-dev.org/conf99/proceedings/lacy01.htm).

SLIDE 10-2

Overview of the Benchmarking Process

Benchmarking will help your community or region understand its technology-based development efforts and "identify an external point of reference, or standard, by which that activity can be measured or judged" thereby improving the region's competitive position (McNair and Leibfried, 1992, p. 2). The ultimate goal of benchmarking is to identify best practices that might be adopted in your region that will aid the implementation of your technology strategic plan.

The benchmarking process should be an ongoing cycle of continuous improvement for your community in which it periodically measures its progress against that of comparable communities or regions. Your benchmarking effort might consist of the following steps (see McNair and Leibfried, 1992, p. 52):

1. Identify the core issue or problem.
2. Establish baseline performance levels for your community.
3. Gather information about comparable communities.
4. Analyze data and benchmark results.
5. Implement changes in existing efforts to reflect these results.

Throughout the benchmarking process, you should attempt to engage the various stakeholders in the

process, including community residents, private and public leaders, educational institutions, and community-based organizations.

SLIDE 10-3

Data Sources and Indicators for Technology Benchmarking

An effective benchmarking effort is built on the selection of community/regional indicators or measures that can be tracked over time. These measures can be both quantitative and qualitative. Appropriate indicators enable a community or region to assess its progress from one point in time to another and to compare its performance to other communities. When choosing indicators and data sources, the following factors should be considered (Salant and Dearien, 2000):

- Validity – does the indicator measure what it is supposed to measure?
- Availability and timeliness – are data readily available and accessible?
- Reliability – are the data compiled in a consistent manner over time?
- Understandability – is the indicator simple enough to be understood by the public?
- Policy relevance – is the indicator important for technology-based development?

A variety of data may be used for benchmarking purposes, but one of the most critical indicators of technology performance is the number and percent of technology-related jobs in your region and the rate of formation of new technology companies. A representative list of indicators to consider includes:

- Number, types, start-up rates, and employment levels of technology-intensive companies in the region.
- Measures of university and federal research activities.
- Population and income characteristics of the population.
- Educational and occupational characteristics of the workforce.
- Quality of life indicators.
- Availability of seed and venture capital financing.

SLIDE 10-4

Data Sources and Indicators for Technology Benchmarking (Cont.)

Many technology indicators are published at the national or state level, but you will most likely want to compile similar data at the county level, which can be more difficult to do. The following specific measures are often used to assess a community's progress toward and capacity for technology-based economic growth:

Number of employed scientists and engineers – Source: Census of Population and Housing. U.S. Department of Commerce, Bureau of the Census.

Number of high school graduates and persons with associate degrees – Source: Census of Population and Housing. U.S. Department of Commerce, Bureau of the Census.

Utility patents granted – Source: United States Patent Grants by State, County and Metropolitan Area, Office of Electronic Information Products, U.S. Patent and Trademark Office.

Number of employees in tax exempt research establishments – Source: Census of Service Industries, Geographic Area Series. U.S. Department of Commerce, Bureau of the Census.

Federal science and engineering obligations to universities in MSA – Source: Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions. National Science Foundation.

Dollars from the Small Business Innovation Research Program – Source: SBIR/STTR List of Awards. Small Business Administration, Office of Technology, Small Business Innovation Research Program.

Venture capital placements – Source: Pricewaterhouse Coopers LLP Survey.

Tech company growth rates and employment – Source: CorpTech Directory of Technology Companies. Corporate Technology Information Services, Inc.

SLIDE 10-5

Additional Data Sources for Benchmarking Indicators

Two additional sources for possible community-level technology indicators are the Metropolitan New Economy Index produced by the Progressive Policy Institute and the Milken Institute's ranking of high-tech metro areas. The Metropolitan New Economy Index uses 16 indicators that capture the essence of the new economy under five broad areas: 1) knowledge jobs, 2) globalization, 3) economic dynamism and competition, 4) the transformation to a digital economy, and 5) technological innovation capacity. Some of the index's specific indicators and their respective sources are shown in the table below.

Metropolitan New Economy Index Indicators, 2001

Indicator	Measure	Data Source
Managerial, Professional, and Tech Jobs	Professional employment as a share of total employment	U.S. Commerce Dept. Bureau of Economic Analysis
Workforce Education	Weighted measure of educational attainment	U.S. Bureau of Labor Statistics
Export Focus of Manufacturing	Manufacturing export sales per manufacturing worker	U.S. Commerce Dept. International Trade Admin.
"Gazelle" Jobs	Jobs in companies with annual sales revenue growth 20% or more as a share of total employment	Corporate Demographic: Corporate Almanac, by David Birch, A. Haggerty, and W. Parsons. Cognetics, Inc.
New Publicly Traded Companies	Number of companies' initial public stock offerings as a share of gross metron product	Securities and Exchange Commission, EDGAR-ONLINE
Online Population	Percent of adults with Internet access at work or home	Adult Internet Penetration, Scarborough Research
Broadband Telecommunications Capacity	Number of broadband providers per zip code area	Federal Communications Commission
Computer Use in Schools	Percent of children using computers in the classroom	U.S. Bureau of Labor Statistics-Current Pop. Survey
Commercial Internet Domain Names	Number of commercial Internet domain names per total number of businesses	http://www.zooknic.com
Internet Backbone	Total capacity of all Internet backbone links to other metropolitan areas as a share of total employment	Directory of internet Service Providers, by Edward Malecki
High-Tech Jobs	Tech-intensive jobs as a share of total employment	U.S. Census Bureau County Business Patterns
Degrees Granted in Science and Engineering	Weighted measure of the degrees grated in science and technical fields as a share of the workforce	National Science Foundation, CASPAR Database

Patents	Number of utility patents issued to companies or individuals per 1,000 workers	U.S. Patent and Trademark Office
Academic Research and Development (R&D)	Combined measure of industry investment in R&D at academic institutions and total academic R&D	National Science Foundation, CASPAR Database
Venture Capital	Venture capital invested as a share of gross metropolitan product	Pricewaterhouse Coopers LLP, Money Tree Report

Source: Progressive Policy Institute, The Metropolitan New Economy Index, 2001.

The Milken Institute study uses four technology measures in its ranking of metropolitan regions. The first, referred to as the "Tech-Pole," is a composite index that combines the percentage of national high-tech real output and the concentration of high-tech industries—or location quotient—for each region. The second measure is the high-tech output location quotient for a region. This measure compares the value of high-tech output as a share of total output in a region relative to the same ratio for the nation. The other two indicators employed by the Milken Institute rankings are relative output growth and percent of national real output in a region.

SLIDE 10-6

Additional Data Sources for Benchmarking Indicators (Cont.)

It is important to note that the benchmarks or measures you choose must be flexible and fluid in order to adapt to changing circumstances. The indicators must be continuously reviewed and re-calibrated as needed.

Additional Benchmarking Resources

DeVol, Ross C. 1999. America's High-Tech Economy: Growth, Development, and Risks for Metropolitan Areas. Santa Monica, CA: Milken Institute.

Harrington, H. James and James Harrington. 1996. High Performance Benchmarking: 20 Steps to Success. New York: McGraw-Hill.

Lacy, Donald P. and Pamela Gibson. 1999. Developing Benchmarks and Measuring Progress Toward Community Strategic Goals. Conference proceedings, Community Building Weaving the Fabric of Resilient Community, Spokane, WA. Available at http://www.comm-dev.org/conf99/proceedings/lacy01.htm.

McNair, C.J. and Kathleen Leibfried. 1992. Benchmarking: A Tool for Continuous Improvement. Essex Junction, VT: Oliver Wight Publication, Inc.

Salant, Priscilla and Christy Dearien. 2000. Local Government Guide to the Internet: Online Resources for Communities. Lexington, KY: TVA Rural Studies, Univ. of Kentucky.

SLIDE 10-7

Web Resources for Benchmarking

www.comm-dev.org/conf99/proceedings/lacy01.htm

www.communitycouncil.org/Indicators.pdf

www.jointventure.org/siliconvalley2010/a1.htm

www.neweconomyindex.org/metro/

www.milken-inst.org/poe.cfm?point=pub03

SLIDE 10-8

Conclusion

This concludes the Team Delta online training modules. We hope that you have found the information and tools presented useful to you as you think about steps to take to help your region position itself for the future.

The partners of Team Delta welcome your feedback and input into this effort. We are also available to offer you assistance in the implementation of a Community Technology Assessment in your area.

Glossary of Terms

Successful Firms
At the core of the Community Technology Assessment model are successful firms. These firms are probably higher-value-added companies that share characteristics such as growth, paying higher than average wages, and exporting goods and services nationally and internationally.

Some such firms may be in a cluster of companies with similar products, services or technologies that are interdependent through mutual reliance on specialized labor pools, similar technologies, or common markets. The linkages between these clustered companies vary, but the most successful have one or more business networks of companies working together to achieve a common goal. Some networks cooperate in "soft" areas such as quality and workforce training, while others collaborate more intensely in areas such as joint marketing or even production.

Suppliers, other support companies, business partners (e.g., banks), and competitors and collaborators
The "core" successful companies are "surrounded" by local customers, suppliers, other support companies, business partners (e.g., banks), competitors, and collaborators. The idea is that a successful economy is not the result of individual, monolithic employers, but rather a diverse set of interrelated businesses with shared dependencies.

Soft Infrastructure
Soft infrastructure in a region are entities such as community colleges, universities, industry associations, and other organizations that provide technological, research and development, and workforce development assistance to companies in the community. The soft infrastructure also incorporates the social capital, that is, the relationships, trust, and overall social environment within the community that supports (or inhibits) exchange of information and innovation within a community.

Physical Infrastructure
Physical infrastructure includes, among other things, transportation resources, public utilities, land, and building sites. It also include "new" hard infrastructure such as local Internet Service Providers (toll free

access), broadband access to the internet, teleconferencing facilities, access to Geographic Information Systems, electronic funds transfer, distance learning, etc.

Business networks

Clusters

Competitive advantage

"Hard" infrastructure

Location quotients

Traded sectors

Social capital

"Soft" infrastructure

Value-added

Tools

Below are tools that accompany the training modules to help a community better understand its economy and to assist with the process of conducting a Community Technology Assessment. This information supplements what you find in the modules.

Module 1

Module 2

Module 3—Building Community Competitive Advantage

To learn more about alliances and business networks, you may want to explore some web-based modules that Regional Technology Strategies (a Team DelTA partner) created for the Manufacturing Extension Partnership (MEP) on this subject. While oriented toward the MEP, they still contain a great deal of foundation information about how to form and add value to business networks that is useful to those beginning in this field. The modules may be found at <http://www.rtsinc.org/aln/weekly.html>.

Module 4

Module 5

Module 6

Click here to download a sample Community Technology Assessment invitation list and agenda.

Module 7

The Team Delta Community Technology Assessment's Facilitator's guide may be downloaded by clicking here.

Module 8

Module 9

Module 10

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